CORPORATE GOVERNANCE MECHANISMS, SUCCESSION PLANNING AND FIRM PERFORMANCE: EVIDENCE FROM MALAYSIAN FAMILY AND NON-FAMILY CONTROLLED COMPANIES

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CORPORATE GOVERNANCE MECHANISMS, SUCCESSION PLANNING AND FIRM PERFORMANCE: EVIDENCE FROM MALAYSIAN FAMILY AND NON-FAMILY CONTROLLED COMPANIES

By

NOOR AFZA BINTI AMRAN

Thesis Submitted to the Centre for Graduate Studies,
Universiti Utara Malaysia,
in Fulfillment of the Requirements for the Degree of Doctor of Philosophy

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ABSTRAK

Kombinasi tadbir urus korporat dan penggantian keluarga dalam menguruskan syarikat milikan keluarga memainkan peranan penting di dalam meningkatkan prestasi syarikat, dan memastikan syarikat keluarga berkekalan ke generasi akan datang. Kajian ini melihat kepada kesan mekanisma tadbir urus korporat (lembaga pengarah dan struktur pemilikan saham) serta sifat penggantian keluarga dengan prestasi syarikat. Kajian ini menggunakan kaedah data panel, dan 420 syarikat di Bursa Malaysia telah dijadikan sampel kajian. Keputusan kajian menunjukkan syarikat kawalan keluarga menunjukkan prestasi yang lebih baik berbanding dengan syarikat bukan kawalan keluarga. Namun, bukan semua elemen tadbir urus korporat signifikan, dan kesannya berbeza bagi syarikat kawalan dan bukan kawalan keluarga. Keputusan menunjukkan saiz lembaga pengarah yang besar, dan kehadiran pengarah profesional (pakar) meningkatkan nilai syarikat, bagi syarikat kawalan dan bukan kawalan keluarga. Seterusnya, syarikat kawalan dan bukan kawalan keluarga yang mengamalkan kepimpinan bersama menunjukkan penilaian prestasi yang lebih baik. Dari segi struktur pemilikan, pemilikan pengurusan dan keluarga menunjukkan corak 'non-linear' dengan prestasi syarikat. Keputusan juga mengesahkan bahawa pegawai tertinggi eksekutif keluarga, pengasas atau generasi pengganti muda, dan syarikat keluarga generasi kedua membentuk nilai syarikat yang lebih tinggi. Oleh itu, pengubal undang-undang perlu mengambilkira perbezaan tadbir urus korporat bagi syarikat keluarga dan bukan keluarga, dan membentuk sekumpulan pengarah bebas yang berpengalaman dan cekap dalam meningkatkan tadbir urus korporat di Malaysia.

ABSTRACT

The combination of corporate governance mechanisms and family succession play an important role in enhancing companies' performance, and in ensuring that family companies are sustained for the next generation. This study investigates the effect of corporate governance mechanisms (board and ownership structure) and succession attributes with company performance among Malaysian listed companies. This study used the panel data approach, and 420 companies on Bursa Malaysia were included as the sample. The results explain that family-controlled companies have higher firm value than non-family controlled companies. However, not all elements of governance mechanisms are significant, and the effects differ between family-businesses and non-family businesses. The results indicate that larger board size and inclusion of professional directors (experts) enhance firm value, both for family and non-family controlled companies. Further analysis shows that family and non-family companies that practise dual leadership show higher company performance. In terms of ownership structure, managerial and family ownership were found to show a non-linear pattern (entrenchment-alignment-entrenchment) with firm performance. Findings also signify that family CEO, CEO with higher education background, young CEO's and second generation CEO's enhance greater company performance. Thus, regulators need to note the different corporate governance practices between family and non-family businesses, and to create a pool of independent directors with experience and skills in enhancing better corporate governance in Malaysia.

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LIST OF ABBREVIATIONS

BM	: Bursa Malaysia
MB	: Main Board
SB	: Second Board
PLCs	: Public Listed Companies
ROA	: Return on Assets
OCF	: Operating Cash Flow
Q	: Tobin's Q
ROE	: Return on Equity
EPS	: Earning per Share
GLS	: Generalised Least Square
CEO	: Chief Executive Officer
US	: United State
UK	: United Kingdom
The Code	: The Malaysian Code of Corporate Governance
MIA	: Malaysian Institute of Accountants
MICG	: Malaysian Institute of Corporate Governance
MSWG	: Minority Shareholder Watchdog Group
SC	: Securities Commission
FCCG	: High Level Finance Committee on Corporate Governance

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 Overview of the chapter

This chapter is organized into eight sections. Section 1.2 discusses the background and issues relating to family and non-family business performance, ownership structure and succession planning issues in Malaysia. Section 1.3 describes on the scope of the study. Next, the problem statement is discussed in Section 1.4. Then the research questions are stated in Section 1.5 and Section 1.6 presents the research objectives. Next, the operational definitions for the purpose of this study are defined in Section 1.7. The significance and contributions of the study are explained in section 1.8. Finally, Section 1.9 explains the organisation of the thesis.

1.2 Background and motivation of the study

There have been various studies conducted on family and non-family companies overseas (Daily & Dollinger, 1992; McConaughy, Walker, Henderson & Mishra, 1998; Anderson & Reeb, 2003; Miller & Breton-Miller, 2006; Villalonga & Amit, 2006; Andres, 2008; Chu, 2009; Lin & Chang, 2010). Empirical studies in the United States (US) concluded that family outperform non-family firms (Anderson & Reeb, 2003; Miller & Breton-Miller, 2006; Villalonga & Amit, 2006). However, other countries such as those in

Europe, Australia and Chile found the results to be varied. In sum, although studies on family firms have been carried out extensively there are few studies that specifically compare the performance of family-controlled and non-family controlled companies in Malaysia. Anecdotal evidence claims that Malaysian family companies perform better than other companies. However, there is little empirical evidence from studies conducted in Malaysia. Locally, Abdul Samad, Amir & Ibrahim (2008) carried out a study for the years 1999 to 2005. They found mixed findings. Family ownership experiences a higher value than non-family ownership when using Return on Equity (ROE), but has a lower value when Tobin's Q and Return on Assets (ROA) are used as the performance indicators. Furthermore, Abdul Samad et al. (2008) only considers three variables: board size, independent directors and duality performance.

Another study by Wan-Hussin (2009) does examine whether alignment (entrenchment) effect leads to high (low) corporate transparency. This study used Malaysian firms in 2001 to 2002 as the sample. Study found that family firms are more inclined to disclose all the required items for the primary basis of segment reporting. Firms with higher proportion of affiliated directors are more likely to make greater segment disclosures, and there is no evidence to support that independent director and institutional investors promote corporate transparency.

Another local study by Zainal Abidin, Mustaffa Kamal and Jusoff (2009) examines the board structure and corporate performance in Malaysia. This study utilised 75 Malaysian companies listed on Bursa Malaysia in year 2003. Findings reveal that board composition

and board size have a positive impact on firm performance, while the effects of director's ownership and CEO duality on the value added efficiency of firm's total resources are not established. These results indicate that the importance of independent non-executive directors on the board by The Code and the requirements of Bursa Malaysia is deemed pertinent to the long-term corporate performance.

In recent study by Mohd Ghazali (2010) has examined the ownership structure, corporate governance and corporate performance in Malaysia. This study has used 87 non-financial listed companies in year 2001. The findings reveal that corporate governance variables (board size and independence) do not explain the corporate performance (Tobin's Q). Nonetheless, government as a substantial shareholder and foreign ownership were found to significanificantly associated with Tobin's Q.

Therefore, in this study, besides testing the board size, board independence and CEO duality, other corporate governance variables such as director's education qualification, director's professional qualification, family managerial ownership and non-family managerial ownership which are not captured by previous studies are examined in this study. It is presumed that these variables also influence the performance of Malaysian companies. Moreover, these are the gaps that need to be researched, as few studies examine these variables. This study will test all the above mentioned variables in one study. Therefore, it motivates the researcher to examine and reveal the current scenario of family-controlled company performance in Malaysia in relation to succession planning. In terms of corporate governance attributes, this study includes two new variables that

have not yet been tested in other studies, these are: (1) director's with degree background, and (2) director's with professional qualification. It is suggested in the Malaysian Code of Corporate Governance (the Code) that boards should include at least one director who is a member of the Malaysian Institute of Accountants (MIA). The Code requirements show that it is important to have qualified directors in helping and advising the business operation. Therefore, this study considers these variables (director's education and professional qualification) as part of the hypotheses variables in this study.

The next issue addressed in this study is ownership structure. It is common for East Asian countries and also emerging countries to have concentrated ownership. Companies are usually controlled by families or the State (La Porta, Lopez-De-Silanes, Shleifer & Vishny, 1998; Claessens, Djankov & Lang, 2000; Khan, 2004; Abdul Rahman, 2006). A study by Claessens et al. (2000) in nine East Asian countries (Hong Kong, Indonesia, Japan, South Korea, Malaysia, the Philippines, Singapore, Thailand and Taiwan) reports that more than two thirds of the firms are controlled by a single shareholder. About 60% of concentrated firms top management are related to the family of the controlling shareholder and there is extensive family control in more than half of East Asian firms.

Another research found that about 80% (from 890 companies listed on Bursa Malaysia) are family-owned businesses, with the exception of quasi-government owned firms, state development corporations, banks and multinationals (Sooi, 2003). Abdul Rahman (2006) evidenced that listed firms in Malaysia are owned or controlled by family and to be inherited by their descendants. Further, about 59% of companies are still managed by the

founder and 30% has been transferred to second generation (Shamsir Jasani, 2002). Therefore, Malaysia does have concentrated ownership and most of the companies are controlled by family companies. These factors led the researcher to conduct this study.

In terms of methodology and data gathering advantages, until this present study, the researcher observed that past research covered the period from 1995 to 2005. Local studies in the ownership structures have used data for the years 1995 to 2001 (Mat Nor, Mohd Said & Redzuan, 1999; Che-Ahmad, Abdul-Manaf & Ishak, 2003; Chu & Cheah, 2004; Ishak, 2004; Abdullah, 2006; Tam & Tan, 2007; Zainal Abidin, Mustaffa Kamal & Jusoff, 2009; Wan-Hussin, 2009; Mohd Ghazali, 2010) and year 1999 to 2005 (Ibrahim, Amir & Abdul Samad, 2009).

For the research methodology approach, Ordinary Least Square (OLS) and logit regression models were used to test firms for the year 2001 (Ishak, 2004), OLS method for 79 firms in year 1993 (Mat Nor et al., 1999), multiple regression for 234 Bursa Malaysia (BM) companies (Che-Ahmad et al., 2003), multinomial logistic regression for 147 firms for 1995 to 2001 (Chu & Cheah, 2004), pooled logistic regressions for 86 non-financial distressed firms on BM from 1999 to 2001 (Abdullah, 2006), Structural Equation Model (SEM) for the top 150 public listed companies (PLCs) for 1994 to 2001 (Tam & Tan, 2007) and 474 companies in Main Board (MB) were utilised for 1999 to 2005 (Ibrahim et al., 2009). Therefore, the advantage of this study compared to previous studies is that: (1) this study uses the panel data approach, which is more robust in results, (2) utilised data from 2003 to 2007 with 420 companies, and (3) applies panel data

estimation (GLS estimation) to capture new findings on family and non-family companies in Malaysia.

Family succession is also another part considered in this study. Succession planning is a new issue in the Malaysian environment. This study claims that the majority of family companies in Malaysia evolved from traditional family owned companies. Family companies do not embrace openness in the firm's practices and they still practice a similar business culture to the founders (Ow-Yong & Cheah, 2000). A survey conducted by Shamsir Jasani (2002) found that the majority of Malaysian family firms are small-scale; the founders manage the firm with help from their children and relatives; and the founders do not force the children to join the firms, unless the children themselves are willing to work with their families. Horii (1991) claims that the majority of businesses in Malaysia are owned and operated by the Chinese. This is supported by Sendut (1991) who claims that the Chinese belong to a cultural tradition of ancestor worship and that wealth is normally derived from family business, while their ambitions tend to be dynastic and perpetuate family fortunes. Thus, the empirical research briefly gives an overview on the succession plan among companies in Malaysia. Thus, this study focuses on the choice between a family and professional CEO concerning the succession attributes such as education background, CEO age, gender and family generation with company performance.

Moreover, this study measures the company performance based on two perspectives: accrual based and cash flow based measures. Tobin's Q (Q), Return on Assets (ROA),

Return on Equity (ROE) and Earnings per Share (EPS) are the accrual based measures. Operating Cash Flow (OCF) is based on the cash-flow measure. The two approaches are adopted in this study because there are claims that accrual based measures are open to manipulation by managers, whereas the cash flow measure reflects the true value of the company. The operating cash flows are a useful measure of operating performance in determining a firm's value (Kaplan, 1989; Jain & Kini, 1994; Kim, Kitsabunnarat & Nofsinger, 2004; Abdul Rahman & Limmack, 2004; Mohd Ali, Mohd Salleh & Hassan, 2008; Wan-Hussin, 2009). Thus, both types of measure are used in this study so that the results are more robust.

Therefore, this study fills the existing gap by using panel data to examine the relationship between corporate governance mechanisms (board and ownership structure) and succession planning with company performance. Furthermore, in contrast to previous studies, which focus on broad corporate governance issues, this study concentrates specifically on comparing family-controlled and non-family controlled companies and the succession planning issue in Malaysia. In ensuring that family companies remain for the next generation, families need to plan, strategise and maintain the family empires to last in perpetuity.

1.3 Scope of the study

This study focuses on examining the relationship between corporate governance mechanisms (board governance and ownership structures) and succession planning

attributes for family and non-family controlled companies with firm performance. The sample of the study was 420 companies listed on Bursa Malaysia from 2003 to 2007. This study used secondary data available from the annual reports, books, magazines, newspapers, Thomson database dan Bursa Malaysia database. In term of board governance, the variables tested in this study were board size, board independence, director's education background, director's expertise and leadership structure. For ownership structure, this study examines three types of ownership structures that were managerial ownership, family managerial ownership and non-family managerial ownership. In term of succession attributes, the variables tested were owner/professional CEO, CEO education, CEO age, gender and family generation. While the firm performance were measured using were Tobin's Q, Return on Assets (ROA), Return on Equity (ROE), Earnings per Share (EPS) and Operating Cash Flows (OCF).

1.4 Problem statement

Family businesses form an essential part of the Malaysian economy. It is estimated that family companies contribute more than half of Malaysia's Gross Domestic Product (Ngui, 2002). Locally, most family firms evolved from small enterprises over the years to the giant conglomerates of the present (Shamsir Jasani, 2002). There are a number of prominent firms that are family-controlled and the number of Malaysian firms is increasing yearly due to the positive economic growth (PricewaterhouseCoopers, 1998; Ping, 2001; Piesse & Khatri, 2001; Claessens & Fan, 2002; Haniffa & Cooke, 2002;

Khatri, Leruth & Piesse, 2003; Soederberg, 2003; Gabriel, 2007; Ibrahim & Abdul Samad, 2010).

Although some of the prominent Malaysian family companies like Sapura, Melewar Group, Genting, YTL, Tan Chong, Oriental and Berjaya Group have ventured into diverse economic sectors, there are also smaller companies like Habib and Kamdar that maintain their business within their respective sectors. Anecdotal evidence claims that Malaysian family companies perform better, however, there is little empirical evidence to verify the matter. Thus, this study examines whether Malaysian listed family-controlled companies perform better than non-family controlled companies or vice versa. Further, the practice of corporate governance mechanisms in the companies can also influence the firm performance. This may be why some companies are better than the others. So, this issue also has pushed the reasearcher to examine the corporate governance mechanisms for family-controlled and non-family controlled companies. Do family-controlled and non-family controlled companies have the same corporate governance mechanisms such as the board size, board independence, director's education background, director's qualification and leadership structure?

Further, does ownership structure influence firm value? Malaysian ownership is claimed to be concentrated and most shares are owned by the families or owners/large shareholders and managers. So, with significant amount of family ownership, there is a danger of expropriation of minority shareholders by the family shareholders or major shareholders. The reasons are that the controlling or major shareholders have more power

and control on the company, so it is easier for them to make decision that will give benefits to them to the detriments of minority shareholders. Further, managers are rewarded with managerial shares in order to align the interests of the managers and the company in maximising the shareholders wealth. Thus, the issue in here is that whether ownership structure (managerial ownership, family managerial ownership and non-family managerial ownership) significantly influences firm performance or not.

In addition to the ownership issue, the next issue studied is on the succession planning in family companies and its affects company performance. Preparing children to take over the wheel of a firm has become a challenging task in today's modern business. It is a tough challenge for family businesses to pass the torch to their children (Gabriel, 2007). This is supported by the Khind Holdings Bhd. Group Chief Executive Officer (CEO), Cheng Ping Keat, who is the son of the company founder. He admitted that to keep a family business alive is the toughest management job on earth (Damodaran, 2006). Sometimes the successor is not ready yet to take the responsibilities or the issue of gender arises. Family companies do prefer to appoint son rather than daughter, as the son will carry the family name as the family identity (Kuratko, 1993; Ket de Vries, 1996).

Further, is it viable to protect the family companies for the next coming generation? A Chinese saying claims that wealth does not endure three generations. Although this statement may or may not be true, many Asian family firms suffer from this phenomenon (Ngui, 2002). A Chinese family firm seldom lasts longer than three generations because the offspring have a propensity to take the business for granted and lack motivation to

sustain the firm (Wong, 1985). The older generation were more straightforward, and the elders looked after the younger ones. However, the next generation mostly looks out for themselves (Tat, 1992). As a result, many family companies have dissolved or family shares have been transferred to outsiders.

Further, it is also tough to get a potential successor who has the calibre to manage the business. Some family companies train their sons or grandsons to be the successor. However, failure occurs when the successors are incapable of handling the tasks. Therefore, family companies need to include professional management (non-family managers) based on being the people most qualified for the job rather than on criteria such as blood or regional ties (Ping, 2001). This is to ensure the family firms survival. For example, Public Bank Bhd. is controlled by Tan Sri Teh Hong Piow and it is professionally managed by Teh and his managers. Although Public Bank was founded by Teh, none of his children hold significant positions within the group. Thus, based on the succession issue discussed above, are Malaysian family CEOs prepared and ready for succession planning? In addition, do family companies need a professional CEO to manage the family empires?

1.5 Research questions

This study focuses on the relationship of corporate governance mechanisms (board and ownership structure) and succession planning attributes with company performance.

In general, this study attempts to answer the following questions:

1) Do family-controlled or non-family controlled companies have higher company performance?
2) Is there any association in corporate governance attributes in family and non-family controlled companies with company performance?
3) Is there any association between the managerial, family-controlled and non-family controlled companies ownership with company performance?
4) Is there any association in succession planning attributes in family-controlled companies with company performance?

1.6 Research objectives

The main objective of this study is to examine the corporate governance mechanisms (board and ownership structure) and succession attributes in family and non-family controlled businesses with company performance among PLCs in Malaysia. The corporate governance attributes include board size, board independence, director's education background, director's with a professional qualification and leadership structure. The ownership structure consists of the managerial ownership, sub-divided into family managerial ownership and non-family managerial ownership. The succession attributes include family or professional CEO, education, age, gender and family generation.

The following are the specific objectives of the study:

1) To examine the family and non-family controlled companies relationship with company performance.
2) To examine the corporate governance attributes relationship in family and non-family controlled companies with company performance.
3) To examine the managerial, family-controlled and non-family controlled companies relationship with company performance.
4) To examine the family succession attributes relationship with company performance.

1.7 Operational definition

The operational definitions for the selected variables in this study are as follows:

1) Firm performance refers to Tobin's Q (Q), Return on Assets (ROA), Return on Equity (ROE), Earnings per Share (EPS) and Operating Cash Flow (OCF). These indicators have been used by previous studies (Wiwattanakantang, 2001; Anderson & Reeb, 2003; Lee, 2004; Villalonga & Amit, 2006; Maury, 2006; Miller & Miller, 2006; Chang & Shin, 2007; Martinez, Stohr & Quiroga, 2007; Abdul Samad et al., 2008, Ibrahim et al., 2009). Q, ROA, ROE and EPS are measured using the accrual-based method. OCF is measured by using the cash-flow method (Bowen, Burgstahler & Daley, 1986; Ali & Pope, 1995; Abdul Rahman & Limmack, 2004; Mohd Ali et al., 2008). Q is defined as the market value of ordinary shares plus the book value of preferred shares and debt divided by the book value of the total assets. OCF is the

ratio of cash flow from operating activities to total assets. OCF is the operating profit before tax and extraordinary items, adjusted for depreciation and goodwill and changes in working capital (that is changes in stocks, trade debtors and prepayments and changes in creditors and accruals). ROA is the earnings before interest, tax, depreciation and amortization (EBITDA) divided by the book value of total assets. ROE is defined as the net income divided by shareholders' equity. EPS is the published earnings for ordinary shares divided by the average number of shares issued during the period.

2) Family-controlled company (FC) refers to these three criteria. For a family company to be selected as a sample, a company must have: (i) founder is the CEO, or successor is the CEO that is related by blood or marriage (McConaughy et al., 1998; McConaughy, Matthews & Fialko, 2001; Yeh, Lee & Woidtke, 2001; Anderson & Reeb, 2003; Villalonga & Amit, 2006; Andres, 2008), (ii) at least two family members in the management, and (iii) families have ownership (direct and indirect shareholdings) of a minimum of 20% in the company (La Porta, Lopez-De-Silanes & Shleifer, 1999; Faccio & Lang, 2002; Sraer & Thesmar, 2006; Villalonga & Amit, 2006; Ibrahim et al., 2009, Chu, 2009).

3) Board size refers to the number of directors sitting on the board (Pearce & Zahra, 1992; Jensen, 1993; Yermack, 1996; Abdullah, 2001; Abdul Samad et al., 2008; Amran & Che-Ahmad, 2009; Sulong & Mat Nor, 2009; Zainal Abidin et al., 2009; Chen & Nowland, 2010).

4) Board independence refers to the number of independent non-executive directors sitting on the board (Abdullah, 2001; MSWG-NUBS, 2007; Abdul Samad et al., 2008; Sulong & Mat Nor, 2009). The Code on Corporate Governance suggests that at least two directors or one third of the board must be independent.[1]

5) Director's qualification refers to the number of directors on the board with at least a degree or higher qualification (Sebora & Wakefield, 1998; Castillo & Wakefield, 2006).

6) Director with professional qualification refers to an individual appointed to sit on the board and holding a professional title or licence such as for accounting (CA, CMA, CPA, CCSA, CCA or CPE), engineering (Ir), finance (CFP), information technology (ISP), business (CFA), law (CLP) or other related field (Johannisson & Huse, 2000; Gul & Yeung, 2004; Anderson & Reeb, 2004; Fairchild & Li, 2005; Guner, Malmendier & Tate, 2008). The Code (2001) requires that a company must have at least one director with an accounting (MIA) background.

7) Leadership structure refers to a business that practises separate or dual leadership. Separate leadership is where the post of the Chairman and CEO is handled by two different people (Abdullah, 2001; 2004; Che-Ahmad, 2003; Ishak, 2004; Abdul Rahman & Mohd Haniffa, 2005; Abdul Samad et al., 2008; Amran & Che-Ahmad,

[1] Malaysian Code on Corporate Governance (2001, Part 2, AA III).

2009; Zainal Abidin et al., 2009) Dual leadership is where a single individual holds the post of the Chairman and CEO at the same time (The Code, 2001).

8) Managerial ownership refers to a situation where the managers (the executive directors) are the shareholders of the company (Jensen & Meckling, 1976; Mat Nor, Said & Redzuan, 1999; Mohd Sehat & Abdul Rahman, 2005; Mat Nor & Sulong, 2007; Mohd Ali et al., 2008).

9) Family managerial ownership refers to family members who own company shares, and, act as the executive directors in the company (Ng, 2005; Andres, 2008; Chu, 2009; Lin & Chang, 2010)

10) Non-family managerial ownership refers to non-family members who own company shares, and, act as the executive directors in the company (Jensen & Meckling, 1976; Mat Nor, Said & Redzuan, 1999; Mohd Sehat & Abdul Rahman, 2005; Mat Nor & Sulong, 2007; Mandaci & Gumus, 2010; Fahlenbrach & Stulz, 2010).

11) CEO refers to the family CEO or professional CEO that manages the family business (Monsen, Chiu & Coole, 1968; Daily & Dollinger, 1992; Ang, Cole & Lin, 2000; Anderson & Reeb, 2003; Villalonga & Amit, 2006; Adams, Almeida & Ferreira, 2009).

12) Professional manager refers to an outsider who is recruited to be the CEO and manages the family business (Lauterbach & Vanisky, 1999; Anderson & Reeb, 2003; Lee, Lim & Lim, 2003; Lussier & Sonfield, 2004; Tyee, 2007; Chitoor & Das, 2007; Fahed-Sreih, 2009; Chu, 2009).

13) CEO education refers to the CEO's level of education (Ibrahim & Ellis, 2007; Fahed-Sreih, 2009).

14) CEO age refers to the age of the CEO at the time he/she is managing the family business (Harveston, Davis & Lyden, 1997; Tyee, 2007; Shaw, Marlow, Lam & Carter, 2009).

15) Gender refers to whether the CEO managing the family business is male or female (Loscocco, Robinson & Allen, 1991; Reuber & Dyke, 1993; Ferrary, 2009; Shaw et al., 2009; Nielsen & Huse, 2010).

16) Family generation refers to the number of generations the family business has gone through since the company was established by the founder (Astrachan, Klein & Smyrnois, 2002; Morck & Yeung, 2003; Zahra, 2005; Villalonga & Amit, 2006; Chu, 2009).

1.8 Contribution of the study

Contribution of the study is discussed in terms of its literature, methodology and practical contributions.

1.8.1 Literature contribution

The findings of empirical studies carried out in the US, UK, Chile, Israel, Hong Kong and other countries regarding family firms and non-family firms performance were found to be mixed. However, the study of Malaysian family and non-family companies with corporate governance mechanisms and succession attributes are lacking. Thus, by conducting this study, findings that are more valuable will be revealed, which helps to enrich the level of corporate governance agenda, especially concerning emerging countries like Malaysia. Particularly, this study uses a sample of Malaysian PLCs. Therefore, the findings may also provide useful information in making comparative studies with family company performance in other countries. To date, there is a lack of studies concerning family succession in Malaysia. By carrying out this study, the findings may explain the level of family companies and the succession planning in Malaysia. It will also provide a signal and guidance to family owners on the preparation of family succession in Malaysia.

1.8.2 Theoretical contribution

In terms of theory contribution, this study highlights the agency theory, stewardship theory and corporate governance perspective in relation to family and non-family firms performance. Few studies (Muth & Donaldson, 1998; Corbetta & Salvato, 2004; Eddleston & Kellermans, 2007) discuss the importance of stewardship theory with relation to family firms and non-family firms. However, this study demonstrates that the stewardship theory complements the other two theories, agency theory and corporate governance.

1.8.3 Methodological contribution

This study uses panel data from year 2003 to 2007. The panel data is particularly useful in answering questions about the dynamics of change and in predicting long-term or cumulative effects that are normally difficult to analyze in a case study or cross-sectional study. In terms of measurement, this study defines a family-controlled company as being more likely to reflect the Malaysian picture with the rules and regulations used in Malaysia, but with reference to previous studies (La Porta et al., 1999; McConaughy et al., 1998; McConaughy et al., 2001; Yeh et al., 2001; Anderson & Reeb, 2003; Faccio & Lang, 2002; Sraer & Thesmar, 2006; Villalonga & Amit, 2006; Andres, 2008; Ibrahim et al., 2009; Chu, 2009). In this study, the measurement of family-controlled company is more refined whereby three conditions need to be fulfilled in order to be considered as family-controlled company. The three conditions are that: (1) Founder is the CEO or

successor of CEO that is related by blood or marriage, (2) with at least two family members in its management, and (3) family directors have ownership (direct and indirect shareholdings) of a minimum of 20% in the company. Previous studies (La Porta et al., 1999; McConaughy et al., 1998; McConaughy et al., 2001; Yeh et al., 2001; Anderson & Reeb, 2003; Faccio & Lang, 2002; Sraer & Thesmar, 2006; Villalonga & Amit, 2006; Andres, 2008; Chu, 2009; Ibrahim et al., 2009) only consider criteria (1) and criteria (3), while criteria (2) is not considered. However, in this study, the selection is more detailed in order to be considered as family-controlled company. Thus, this new measurement of family-controlled company could contribute to enrichment in the measurement of the hypothesis variable.

Another methodological contribution from this study includes the two new variables (director's education and director with professional qualification) introduced in this study. Previously, studies only focussed on board independence in family firms (Schwartz & Barnes, 1991; Fiegner, Brown & Derux, 2000; Hillman & Dalziel, 2003); those studies considered board size and composition including that one-third of board members must be independent directors. However, previous studies did not include testing directors with professional qualification. Therefore, this study considers the director with professional qualification variable in relation to corporate governance conditions in Malaysia.

1.8.4 Practical contribution

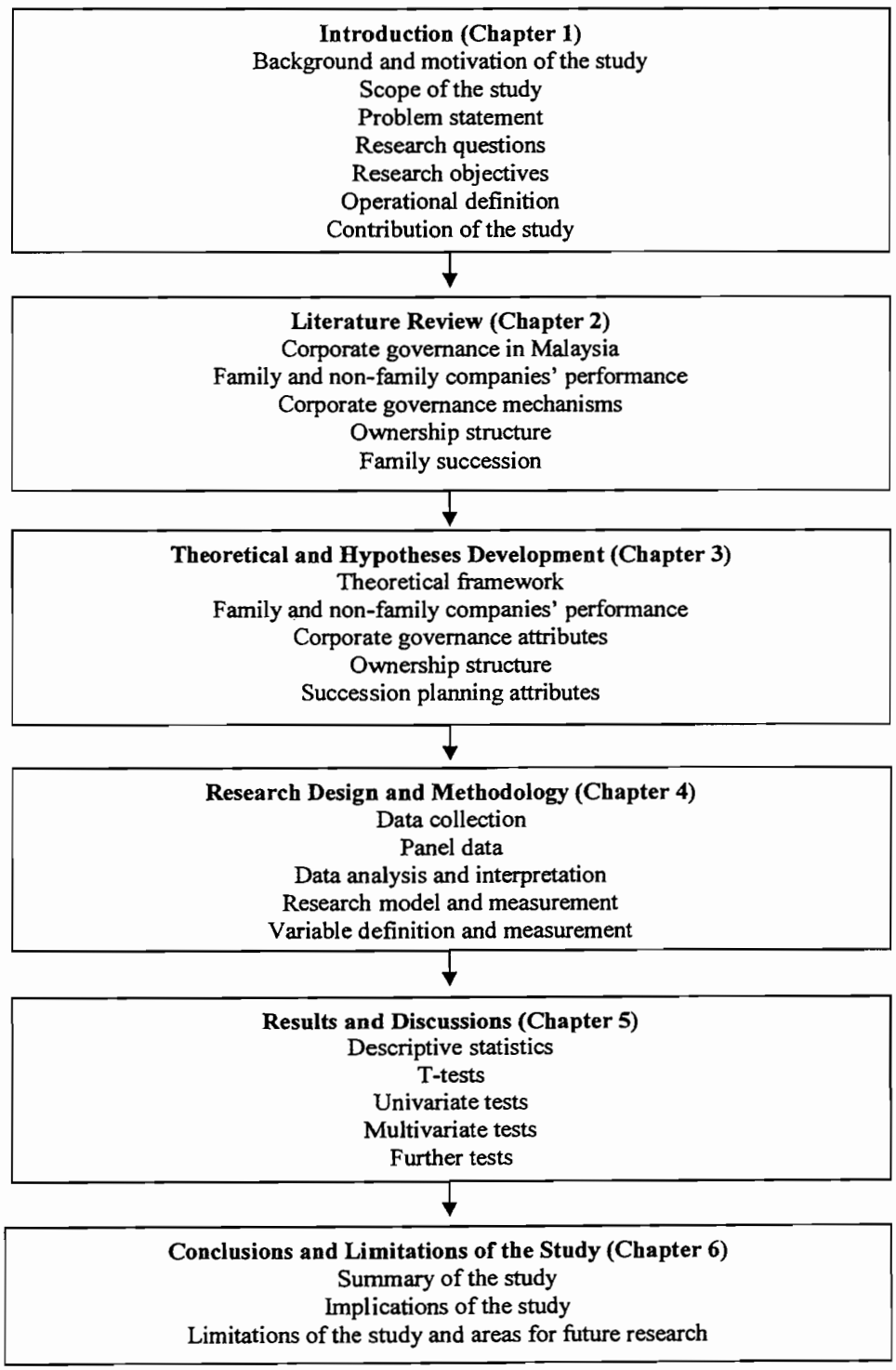
In terms of practical contribution, the findings can provide some meaningful insights into regulators such as the Malaysian Institute of Corporate Governance (MICG), Minority Shareholder Watchdog Group (MSWG), Securities Commission (SC), Malaysian academicians, family owners and consultants in designing rules and regulations for family firms. Currently, companies in Malaysia, including family companies, are practising the same rules and regulations as required by Bursa Malaysia and the Securities Commission. Even though family companies do have a slightly different set of values and their own family culture, these companies do apply the same rules and regulations imposed by the regulators. However, appropriate consideration must be made to the family companies. Some rules and regulations need to be more flexible to accommodate the family companies' environment. For example, family-controlled companies can have the options as whether to adopt rules and regulations imposed by the regulatory bodies or use their existing practices, as long as the family companies practices are not against the rules and regulations. Like in the case of leadership structure, The Code allowed companies to practice their own leadership style (whether separate or duality), but the practice must be revealed in the annual reports. This study also reveals the status of Malaysian family and non-family controlled company performance. It provides valuable information to the potential investors at large concerning the potential companies' performance.

1.9 Organization of the study

This thesis is divided into six chapters. Chapter 1 discusses the introduction, justification for the study, objectives and contributions of the study. Chapter 2 reviews the prior literature on theories and empirical findings on corporate governance mechanisms (board and ownership structure), succession planning and company performance. Chapter 3 explains the research conceptual framework and theoretical justifications for the hypotheses development. This is followed by Chapter 4, which outlines the research design, research instruments, measurement of variables and the data analysis techniques used in this study. Chapter 5 highlights the results and consequent discussions. Chapter 6 concludes this study with a summary of the study, implications and limitations of the study.

Figure 1.1:

Organisation of the Study



1.10 Conclusion

This introduction chapter provides the overview background and motivation of the study. Followed by a brief explanation on scope of the study. Then, a discussion on the problem statements, construct the research questions and research objectives. Next, operational definition on the terminologies used in this study is being discussed, and finally the contributions of the study are highlighted.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview of the chapter

This chapter is divided into six main sections. In section 2.2, the literature review relating to the development of corporate governance in Malaysia is discussed. Section 2.3 highlights family companies around the world. Next, Section 2.4 reviews family and non-family companies' performance. Section 2.5 presents the literature relating to corporate governance mechanisms (board and ownership structure). Section 2.6 discusses literature concerning family succession. Section 2.7 examines succession attributes that relates to firm performance. The last section, 2.8, summarises the content of the chapter.

2.2 Corporate governance in Malaysia

Corporate governance is critical importance not only to the companies' directors who are interested in knowing the level of their companies governance structure and compliance with best practices and regulations, but to market participants who are keenly interested in the governance risks associated with companies. In Malaysia, the scandals in the USA, as well as the 1997-1998 financial crises, have been considered as a wake-up call to the need for better corporate governance and transparency among Malaysian companies. The Malaysian corporate landscape has been blemished by a couple of cases of bad corporate

governance such as Renong, Perwaja Steel and Malaysia Airlines System (MAS). Poor corporate governance, weak investor relations, a low level of transparency in disclosing information by companies listed on the Bursa Malaysia (BMB) and the ineffectiveness of regulatory agencies in enforcing legislation in punishing offenders and protecting minority shareholders, are all partly blamed as reasons attributing to the collapse of several Malaysian companies (Mohamad, 2002). These problems have drawn attention to the need to maintain corporate governance standards, increase transparency and improve investor relations, while the market regulatory agencies such as the Securities Commission (SC) and BMB should press for more effective enforcement of legislation. Corporate governance factors have a strong predicting power on corporate performance, mainly due to debt monitoring and foreign ownership. Findings also reveal that disclosure and timeliness are not significant contributing factors in the relationship between corporate governance and market performance (Che Haat, Abdul Rahman & Mahenthiran, 2008).

The development of corporate governance in Malaysia started back in 1998 with the establishment of the High Level Finance Committee on Corporate Governance (FCCG), the incorporation of the Malaysian Institute of Corporate Governance (MICG), reformation and enforcement of legal requirements (The Malaysian Code of Corporate Governance) and, lastly, the Minority Watchdog Shareholders Group (MSWG), was formed to identify and address weaknesses highlited by the Asian financial crisis. Key reforms have included the development of a comprehensive master plan to further develop the capital market, the demutualization of Bursa Malaysia, introduction of a

Code of Corporate Governance, and changes in the composition and role of its Board of Directors. Further, Malaysia also does comply with Reports on the Observance of Standards and Codes (ROSC) program. The ROSC assessments examine the legal and regulatory framework, enforcement activities and private sector business practices and compliance, and benchmark the practices and compliance of listed firms against the OECD Principles of Corporate Governance (World Bank, 2007).

The following sections discussed on the regulatory bodies that are in-charge in enhancing the corporate governance in Malaysia.

2.2.1 High Level Finance Committee on Corporate Governance

The FCCG was set up on 24 March 1998. The task of this team was to create a framework of corporate governance and setting the best practices for companies. The team comprises the Ministry of Finance (MOF), government officials and representatives of regulatory authorities, industry and corporate sectors. One year after its establishment, the FCCG produced the 275 pages FCCG Report in 1999. The FCCG Report was published by the SC and is known as the Report on Corporate Governance (1999). The Report was later recognized as the Malaysian Code on Corporate Governance (2000). The report consists of 70 recommendations relating to three matters: (i) the proposed Code; (ii) the reform of laws and regulations on the duties of directors and officers, improving disclosures, enhancing the rights of shareholders and improving the effectiveness of company meetings; and (iii) the training and education of directors.

2.2.2 Malaysian Institute of Corporate Governance

The MICG was established in March 1998 by the High Level Finance Committee on Corporate Governance. It is a non-profit public company limited by guarantee, with founding members consisting of the Federation of Public Listed Companies (FPLC), Malaysian Institute of Accountants (MIA), Malaysian Association of Certified Public Accountants (MICPA), Malaysian Institute of Chartered Secretaries and Administrators (MAICSA), and Malaysian Institute of Directors (MID). The objective of MICG is to raise the awareness and practice of good corporate governance in Malaysia.

2.2.3 Malaysian Code of Corporate Governance

The release of the Code has marked the importance of corporate governance in Malaysia. Corporate governance in Malaysia is established based on the Anglo-Saxon approach, as in the US and UK. The Code was mainly derived from the recommendations in the Cadbury Report (1992) and the Hampel Report (1998) in the UK. Based on the Finance Committee on Corporate Governance (1999), corporate governance has been defined as:

> *"Process and structure used to direct and manage the business prosperity and corporate accountability with the ultimate objective of realizing long term shareholder value, whilst taking into account the interests of other stakeholders".*

The Code was issued in March 2000. It marked a significant milestone in corporate governance reform in Malaysia. The Code consists of the principles, best practices of good governance, optimal corporate governance structures and internal processes. The Code became effective through the revamped Listing Requirements of the KLSE in January 2001. Since the release of the Code, the Malaysian corporate scene has made significant strides in corporate governance standards. The mandatory reporting of compliance with the Code has enabled shareholders and the public to assess and determine the standards of corporate governance by listed companies.

The Code essentially aims to encourage disclosure by providing adequate, timely and relevant information to the investing public to facilitate the making of informed investment decisions and to evaluate the performance of the companies. The recommendations set out in the revised Code are prescriptive in nature. The Code also aims to set out principles, best practices on structures and processes that companies may use in their operations towards achieving the optimal governance framework. The Code comprises of four parts, namely: principles of corporate governance, best practices in corporate governance, principles and best practices for other corporate participants and the explanatory notes. The principles underlying the Code focus on four areas, including: board of directors, director's remuneration, shareholders and accountability and audit. Under this approach, companies in Malaysia should apply the broad principles of good corporate governance as set out by the Code, flexibly and with common sense to the varying circumstances of individual companies.

Later a revised version of the Code was released in 2007. The revised Malaysian Code on Corporate Governance (2007) represents the continued collaborative efforts between the Government and industry. The SC was grateful to the Companies Commission of Malaysia, Bursa Malaysia Berhad, Bank Negara Malaysia, the Bar Council, Federation of Public Listed Companies, Malaysian Institute of Corporate Governance, Minority Shareholders Watchdog Group, Malaysian Accounting Standards Board, Malaysian Institute of Accountants, Malaysian Institute of Certified Public Accountants, Institute of Internal Auditors Malaysia, Malaysian Institute of Chartered Secretaries and Accountants and the Malaysian Investment Banking Association for their invaluable feedback and comments.

Key amendments to the revised Code were aimed at strengthening the board of directors and audit committees, and ensuring that the board of directors and audit committees discharge their roles and responsibilities effectively. The amendments spell out the eligibility criteria for the appointment of directors and the role of the nominating committee. Concerning audit committees, the amendments spell out the eligibility criteria for appointment as an audit committee member, the composition of audit committees, the frequency of meetings and the need for continuous training. In addition, internal audit functions are now required in all PLCs and the reporting line for internal auditors is clarified.

The introduction and revised version of the Code has had a positive impact on corporate governance practices in the Malaysian corporate sector. As a result, the KLSE-

PricewaterhouseCoopers Corporate Governance Survey 2002 found that the reform in Malaysia is headed in the right direction. The survey results indicate that 93% of the investors surveyed felt that Malaysia's standard of corporate governance has improved since the introduction of the Code in 2000. Further, the survey found that non-financial measures such as a company's risk management strategy and profile, quality and independence of its board of directors and the transparency of its disclosures are seen as important factors in making investment decisions.

Based on the study counducted in three countries (Singapore, Malaysia and Thailand), Singapore offers the best corporate governance environment in Asia, while Malaysia corporate governance has had the biggest improvement since 2001 and Thailand lags behind (CLSA, 2001; 2003). In another research by the Asian Corporate Governance Association, the score for Singapore stayed the same, but Malaysia and Thailand have improved (Allen, 2005). The corporate governance presented in company documents does not have an impact on company performance and it is not consistent with requirements made by the Credit Lyonnais Securities Asia and Standard & Poor's. Thus, these findings imply that the corporate governance in ASEAN is more illusion than fact (Chuanrommanee & Swierczek, 2007.)

A survey on corporate governance has been conducted in year 2006 by Minority Shareholder Watchdog Group (MSWG) and Nottingham University Business School (NUBS) with the objective to measure the level of compliance of top 200 public listed

companies. The basic compliance score provides findings for 40 key items relating to specific isssues of board independence, composition, remuneration, committees, performance, risk management, audit and communications with shareholders. Meanwhile the international best practices provide findings in 35 key items relating to transparency, accountability and good governance for business conduct/ethics, investor relations, auditor independence, corporate social responsibility and timely reporting. The main findings indicate that the level of compliance of the top 200 PLCs with the Code and best practices is rising and that for a number of PLCs, the level was approaching maximum compliance as reflected by the basic compliance score. However, the findings of the international best practices imply that generally Malaysian PLCs are still lagging behind in competitiveness with recommended best practices not already enjoined by the Code. The Code is very important and it is recommended that all listed companies in Malaysia including the family companies. Therefore, family companies do not have exemption from compliance to the Code. However, compliance with the Code is not mandatory to companies in Malaysia.

2.2.4 Minority Shareholders Watchdog Group

The Minority Shareholder Watchdog Group (MSWG) was set up as a government initiative to be a part of a broader capital market framework to protect the interest of minority shareholders through shareholder activism. It is one avenue of market discipline to encourage good governance amongst public listed companies with the objective of raising shareholder value over time.

The MSWG has evolved to be an independent research organization concerning corporate governance matters and advises on minority shareholders voting in Annual General Meeting and Extraordinary General Meetings. The MSWG provides a platform for a collective voice to both retail and institutional minority shareholders and advises on voting at general meetings of public listed companies. This has been the first step towards encouraging shareholder activism without recourse to courts (Report on Corporate Governance, 1999).

The MSWG is currently funded up to 75% by the Capital Market Development Fund (CMDF) whilst the balance of 25% is through internally generated funds from the activities of its products and services. The founding members provided funding for the MSWG's start-up and establishment as a permanent organisation with high profile activities.

Currently, the MSWG is substantially funded by the Capital Market Development Fund, a national trust fund as well as through its own efforts. The four founding members of the MSWG are the Armed Forces Fund Board (Lembaga Tabung Angkatan Tentera), National Equity Corporation (Permodalan Nasional Berhad), Social Security Organisation (Pertubuhan Keselamatan Sosial) and Pilgrimage Board (Lembaga Tabung Haji).

2.3 Family companies around the world

Family-owned businesses are found to be common in continental Europe, Latin America and Asia. It is estimated that over two-thirds of worldwide firms are owned and managed by families (Gersick, Davis, Hampton & Lansberg, 1997). A study by Schulze, Lubatkin and Dino (2003) found that family firms make up 80% of organizations in the US. In Chile, it is estimated that 75% of all firms and 65% of medium to large firms are families (Martinez, 1994). Reidel (1994) found that in Germany family companies comprise 80% of German organizations. In Indian, of the top Indian companies, 60% are family-run business groups (Jackling & Johl, 2009).

A survey by the Bank of Italy illustrates that almost 80% family members are employees in the family companies (Corbetta, 1995). Gallo (1995) states that in Spain family-owned companies constitute 17% of the 100 largest companies, 23% of the 1,000 largest companies, and 71% of companies with annual sales that exceed $2 million. Kelly, Lewa & Kamaria (2008) note that family business is prevalent in Kenya and that the founder plays a central role in enhancing the firm's performance. A study in Italy determined that family assets are more concentrated in family firm equity, the boards of directors are less open to outsiders, and key decision-making teams are comprised mainly of family members (Corbetta & Montemerlo, 1999). In Belgium, families actually have an active policy concerning keeping control over the firms (Berghe & Carchon, 2002).

In addition to the spread of family firms around the world, family firms do have unique characteristics that differentiate family firms from non-family firms. In most companies, family members and concentrated shareholders are actively involved in the management and the board (Lane, Astrachan, Keyt & McMillan, 2006). In the US, family members maintain their presence in the firm rather than selling their shares to outsiders. This is because the family members provide a competitive advantage to the firm (Burkart, Panunzi, & Shleifer, 2002). Chrisman, Chua and Steier (2005) found that family firms have the capabilities and competencies to adjust themselves to suit the business environments better than other companies.

Family firms practice different management styles, founders' motivation, family culture and ownership structures (Gomez-Mejia, Tosi & Hinkin, 1987; Whisler, 1988; Daily & Dollinger, 1992; Chua, Chrisman & Chang, 2004). Family firms use different strategies and rely on control systems more than non-family firms (Daily & Dollinger, 1992; Chami, 1999). A study by Litz (1995) claims that the uniqueness of family firms are based on family ties and the intention that the ties will be long lasting. Family firms are very much governed by family traits (Mishra, Randoy & Jenssen, 2001). The family spirits is inculcated as early as during childhood and serves as a monitoring and controlling mechanism in family firms (Fama & Jensen, 1983; Kets de Vries, 1993). Castilo and Wakefield (2006) conducted a survey in 2002 and found that family firms are uniquely suited to succeed over other publicly traded firms due to strong family ties. In addition, the extensive knowledge about a firm by the family members encourages quick and flexible decisions (James, 1999).

Family firms also have greater efficiency, higher profitability and a different risk profile to typical equity holders. The long-term presences of families will benefit the firms through enjoying a lower cost of debt (McConaughy et al., 1998) and maximizing the overall value of the company (Anderson, Mansi & Reeb, 2003). Controlling owners can achieve efficient firm governance by internalising the needs of their family and non-family employees when making decisions, and, therefore, incur low agency costs (Lubatkin, Durand & Ling, 2007). Daily and Dollinger (1992) agreed that family firms are the least costly and most efficient form of organization. Families can combat the potential conflicts between family and firm, therefore, family firms may outperform their competitors, at least economically (Lee, 2004). Families are stable and able to maintain the continuity of the family firms by transferring company assets over time. Thus, the market value of the firm can increase (James, 1999).

In Asia, various literature shows that family firms enhance the economy (Filatotchev, Lien & Piesse, 2005; La Porta et al., 1999). Names like the Ayala family (Philippines), Li Ka-Shing (Hong Kong) and Kyuk Ho Shin (South Korea) are well known among family group companies. In Malaysia, Robert Kuok (Kuok Brothers) and Lim Kok Thay (Genting Group) are among the prominent family businesses in the Malaysian market (refer to Appendix N).

A study by Claessens et al. (2000) evidences that most concentrated firms in Malaysia are dominated by family founders and their descendants. Khan (2004) also evidenced that

most companies in Thai and Malaysia have the the "family based corporate governance model".

> *In East Asia, there is a preponderance of family-based firms that are not necessarily controlled by banks or by equity markets. Nevertheless they do operate economic entities within the context of a relationship-based system which could be considered the family-based corporate governance system (Khan, 2004, p. 100).*

Initially, family business is financed largely by internal funds. As the companies grow over time, the role of banks and outside equity becomes prominent. However, the ultimate power remains with the family groups (Khan, 2004). Next, study by Abdul Rahman (2006) determined that listed firms in Malaysia are owned or controlled by family and that these companies appear to be inherited by their own descendants. Research found that 59% of businesses in Malaysia are still managed by the founder, while 30% are run by second generation where the majority are the founder's children (Shamsir Jasani, 2002). Ibrahim and Abdul Samad (2010) also evidenced that the development of family business in Malaysia has contributed in producing number of tycoons with their respective field. These millionaires in return have contributed towards Malaysian economic growth.

According to Appendix N, the top 40 list of Malaysia's richest individuals issued by the Malaysian Business magazine (February 16, 2010), nearly 64% of millionaires originated from family companies. Among the millionaires who belong to family companies are;

Tan Sri Robert Kuok, Tan Sri Lee Shin Ching, Tan Sri Teh Hong Piow, Tan Sri Lim Kok Thay, Tan Sri Quek Leng Chan, Puan Sri Lee Kim Hua, Tan Sri Vincent Tan Chee Yioun, Tan Sri Azman Hashim, Datuk Lee Yeow Chor, Lee Yeow Seng, Tan Sri Yeoh Tiong Lay, Datuk Seri Lee Oi Hian, Datuk Lee Hau Hian, Tan Sri Francis Yeoh Seoh Sock Ping, Datuk Yeoh Seok Hong, Tan Sri Jeffrey Cheah Fook Ling, Datuk Yeoh Seok Kian, Datuk Michael Yeoh Sock Siong, Datuk Mark Yeoh Seok Kah, Datuk Yaw Teck Seng, Datuk Seri Panglima Lau Co Kun, Datuk Shahril Shamsuddin, Tan Sri Kua Sian Kooi, Shahriman Shamsuddin and Tan Sri Liew Kee Sin.

For instance, Tan Sri Robert Kuok appears to dominate the list with accumulated wealth of RM 42,760 million which is 27% of the wealth of the 40 richest individuals. He has also maintained the position of being the richest man for three consecutive years from 2008 to 2010. Therefore, family businesses are major players in the markets and contribute significantly to the Malaysian economy (Ping, 2001; Soederberg, 2003; Gabriel, 2007; Ibrahim & Abdul Samad, 2010) is supported.

2.4 Family and non-family companies performance

Research on family and non-family firms' performance is well discussed worldwide (Daily & Dollinger, 1992; McConaughy et al., 1998; Anderson & Reeb, 2003; Miller & Breton-Miller, 2006; Villalonga & Amit, 2006; Amran & Che-Ahmad, 2009; Ibrahim et al., 2009). However, the findings on family and non-family firms' performance were found to be inconclusive.

McConaughy et al. (1998) examined differences in efficiency and value for founding family controlled firms (FFCF) and non-FFCF. FFCF refers to a firm where the CEO who is the founder or a descendant of the founder. The study uses matched paired sampling to control for size, industry and ownership effects. The findings show that FFCFs are more efficient and valuable than NFFCFs with respect to industry, size and managerial ownership. Further, findings explain that the descendants-controlled firms are more efficient than founder-controlled firms. The family relationships improve the monitoring and provide incentives for better firm performance. The corporate efficiency and value were found to be unrelated to the managerial ownership level, but related to who the owner-managers are. The findings support that founders and descendants run firms more efficiently than managers without founding family ties.

Experts also found that family firms invest more efficiently than non-family firms because the family intends to pass the firm to succeeding generations (James, 1999; Chami, 1999). In a panel study on S&P 500 firms, Anderson and Reeb (2003) found that family firms perform better than non-family firms, in terms of both market (Tobin's Q) and accounting measures (ROA and ROE). Family ownership is prevalent and present in one-third of the S&P 500 companies and accounts for 18% of the firm shares. Their results are consistent with the findings of McConaughy et al. (1998).

A study by Daily and Dollinger (1992) found that family firms are likely to achieve higher performance than non-family firms. They reported higher sales growth and greater improvement in net margins for family firms compared to non-family firms. Family

firms have greater efficiency and higher profitability than those owned by diverse shareholders. Family firms outperform their competitors, at least economically. Family ownership and management tend to enhance cost efficiency and, thus, promote a higher Return on Investment (Lee, 2004). Lee (2006) extended the works of Anderson and Reeb's. He extended the study until year 2002 with further measures of performance. He found that family-owned companies tend to experience higher employment and revenue growth over time and more profitable.

McConaughy et al. (2001) used the matched pair method in their study in the US. The sample was matched between the closely held firm (CHF) group and the diffusely held firm (DHF) group. The findings show that family firms have higher market to book equity ratios than non-family firms. Family companies that are controlled by the founding family have greater value, operated more efficiently and carry less debt than other type of firms. A study in Germany investigated a sample of 62 family and 62 non-family German firms. Family businesses outperformed non-family firms in terms of operating performance, however, since these firms were measured over a 100 year time-span, it required all firms to survive from 1903 until 2003 (Ehrhardt, Nowak & Weber, 2004).

Research by Maury (2006) uses data for companies in 1998. The sample size was 1,672 non-financial firms in 13 Western European countries (Austria, Belgium, Finland, France, Germany, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland and the UK). It was found that active family control continues to outperform non-family control in terms of profitability in different legal regimes. Family control was shown to have a

lower agency problem between owners and managers, but gives rise to conflicts between the family and minority shareholder.

Another study was conducted in Chile by Martinez et al. (2007) between 1995 and 2004 for 175 Chilean firms. It was found that public family firms perform better than public non-family firms in terms of ROA. Similarly, Sraer and Thesmar (2007) study on corporate performance of family firms listed on French stock exchange between 1994 to 2000. They found that family-owned firms largely outperform widely held corporations in terms of profitability, growth and Tobin's Q. In Australia, Bartholomeusz and Tanewski (2006) found that family firms utilize substantially different corporate structures from non-family firms and these differences lead to performance differentials. In contrast, other studies conclude that the performance of family firms is worse than their non-family counterparts. Barclay and Holderness (1989) note that large ownership stakes reduce the probability of bidding by other agents, thereby reducing the value of the firm. The family's role in selecting managers and directors creates an impediment to outsiders in capturing control of the firm, suggesting greater managerial entrenchment and lower firm values relative to non-family firms.

Other factors that diminish firm performance include large shareholders remaining active in management although they are no longer competent or qualified to run the firm. The implication is that firm performance is even worse for older family firms relative to non-family firms (Shleifer & Vishny, 1997). In a Canadian study (Morck, Shleifer & Vishny, 1988), heir-controlled firms showed low industry-adjusted financial performance relative

to other firms of the same age and size. A study by Cucculelli and Micucci (2006) in Italy found that the negative impact of family companies' performance is exacerbated when company control is passed to the next family generation.

A study by Lauterbach and Vanisky (1999) in Israel evidenced that family firms run by their owners perform worse than the non-family firms. This study examines 280 large public Israel firms on the extent to which performance in Israeli firms was influenced by type of ownership and how the management functions were organized. They distinguished between family firms, firms controlled by a partnership of individuals, firms controlled by a group of firms, and firms where block-holders had less than 50% of the votes. Across these modes of ownership, they then distinguished between firms managed by a representative of the owners and firms being led by a professional top manager. Their analyses demonstrate, first, that family businesses are less efficient than firms with another form of ownership. Second, firms managed by their owners perform worse than those run by a professional manager.

Perez-Gonzalez (2006) analysed the impact of inherited control on firm's performance. Firms where control is inherited undergo a large decline in return-on-assets and market-to-book ratios compared to firms that promote a chief executive officer who is not related to the owner family. A study by Nowland (2008) in East Asian countries (Hong Kong, Indonesia, Malaysia, Singapore, South Korea, Taiwan and Thailand) used a sample of 221 companies and gathered company information for years 1998 to 2004. Findings reveal that family-owned companies are intentionally not improving their board

governance in terms of Tobin's Q and ROA performance to the level of non-family-owned companies in order to retain the private benefits of control.

There are few local studies that discuss family and non-family companies performance in Malaysia. Amran and Che-Ahmad (2009) studied on family-controlled businesses and corporate governance mechanisms with firm value among Malaysian companies. The sample size was 298 companies listed on Bursa Malaysia from 2000 to 2003. The results indicate that board size and leadership structure affect the firm value for all companies. Further analysis shows that family businesses do practice separate leadership structure whilst board size contributes positively towards better performance in non-family companies.

Next, Amran and Che-Ahmad (2010) conducted another study on family and non-family controlled companies' performance. The length of study was extended from 2003 to 2007 with a larger sample size (146 companies). They found that there is a significant difference between family and non-family controlled firm performance when measured by Q, ROA and OCF. Family-controlled companies that include professional directors on the board have better performance. However, family-controlled companies are found to conduct a lower number of meetings. This is due to the fact that family businesses do conduct informal meetings, where they can easily meet and discuss during family gatherings and the discussion could also be made after office hours and not being minuted in official documentations. That is why fewer numbers of meetings are held by the family businesses as compared to non-family businesses.

For non-family controlled companies, board composition, director's qualification and background, meeting and leadership were found to improve firm performance. It is also in line with suggestions made by the Code (2001) that board should consists of a balance of executive directors and non-executive directors (including independent non-executives), and companies need to meet the requirement of one third of the board comprise independent directors. The non-executive directors sitting on the board must possess calibre, credible, necessary skill and experience that bring an independent judgement. In term of meeting, the board should meet regularly, with notice of issued to be discussed and conclusions of the meeting should be recorded, the number of meetings held in a year and details attendance of each individual directors with respect to meetings held must be disclosed. For leadership structure, separate leadership ensure a balance of power and authority so that no individual has unfettered powers of decision (The Code, 2001). Thus, findings show that non-family companies are found to show higher level of compliance towards corporate governance, and thus enhance greater firm performance than family-controlled companies (Amran & Che-Ahmad, 2010).

In contrast to the two local studies on family companies, Ibrahim et al. (2009) found mixed results on firm performance in their studies. The study examined 290 Main Board companies for 1999 to 2005. The performance indicators used in this study were Tobin's Q, ROA and ROE. The findings reveal that firm value is lower in family ownership than non-family ownership when measured using Tobin's Q. However, family ownership experiences a higher value than non-family ownership based on ROE. These findings explain that when using the market share (using Tobin's Q); the firm value reflects the

current scenario of the company as to whether the firm is financially well performed or not. Meanwhile, when using the accounting indicator (ROE), the data used was based on accrual basis and adjustment should be made to compare with Tobin's Q (firm value). Overall, there are extensive studies conducted overseas and few Malaysian studies done in past few years. However, the findings were found to be mixed and further studies are needed to explore the situation.

2.5 Corporate governance mechanisms

Corporate governance is a blend of the internal and external corporate governance mechanisms. Previous literature that discusses the external mechanisms includes the managerial labour market, the capital market (Fama, 1980; Fama & Jensen, 1983; Byrd, Parrino & Pritsch, 1998; Hart, 1995) and legal protection/systems (Shleifer & Vishny, 1997; Denis & McConnell, 2003). The internal governance mechanisms include the board of directors and ownership (Fama, 1980; Fama & Jensen, 1983; Baysinger & Hoskisson, 1990; Hart, 1995). Therefore, this study focuses on the internal mechanisms (board size, board composition, director's education background, director's professional qualification, leadership structure and ownership structure) that influence firm performance.

2.5.1 Board size

The Code (2000) Part AA (XII) states on the size of boards. Every board should examine its size, with a view to determining the impact of the number upon its effectiveness (p. 71). The absolute number of directors is regarded as an important determinant of effective governance (Pearce & Zahra, 1992). The direction of the influence, however, depends on the extent to which the board is able to reach a consensus and take advantage of the knowledge and expertise of the individual members. According to Jensen (1993), a board should have a minimum of seven or eight members to function effectively because boards with a small number of individuals are more likely to agree on a particular outcome (Lange, DeMeo, Silverman, Weiss & Laird, 2000) and to engage in genuine interaction and debate (Firstenberg & Malkiel, 1994). In Australia, boards are usually small with an average number of less than 10 directors (Stapledon & Lawrence, 1996).

Local studies suggest that the average board size is eight, with two independent directors[2], three non-executive directors and three executive directors (PricewaterhouseCoopers, 1998). A study by Abdullah (2001) showed that Malaysian companies have eight members sitting on the board. A study by MSWG-NUSB (2007) also found that on average, boards are made up of eight directors. However, it appears that there were companies that had very small boards and there are several companies

[2]Rule 9 of KLSE Listing Requirements define independent directors defined as directors who are not officers of the firm, who neither are related to its officers nor represent concentrated or family holdings of its shares; who in the view of the board of directors represent the interests of public shareholders, and free of any relationship that would interfere of independent judgment.

that seem to have rather large boards. In another study by Zainal Abidin et al. (2009) evidenced that average number of boards in Malaysia is eight persons. Meanwhile, research also found that there is a strong relationship between firms with smaller boards and firm value for both family and non-family ownership (Abdul Samad et al., 2008). In their study, Amran and Che-Ahmad (2009) found that small board size is preferred to a large board size. Non-family controlled businesses that have a small board size outperform non-family controlled businesses with a large board size. This explains that small board size enhances the firm value. However, Bhagat and Black (2002) found no relation between firm performance and board size.

There are also debates among experts that claim a larger board is better than a smaller board, and vice versa. Pearce and Zahra (1991) agree that large boards are particularly effective because they provide counsel and advice regarding the strategic options of the firm. A large board has more capabilities and resources to solve group tasks. Larger firms are likely to benefit from having a larger board of directors because they have more external contracting relationships. In addition, it also increases the range of perspectives brought to solve on problems (Haleblian & Finkelstein, 1993). The board's capacity for monitoring increases as more directors are added. The benefit may be outweighed by the incremental cost of poorer communication and decision-making associated with larger groups. Such a viewpoint has been advanced by Lipton and Lorsch (1992) and endorsed by Jensen (1993). Haniffa and Cooke (2005) argue that bigger boards may be constructive for some companies as they provide diversity that helps companies secure

critical resources and reduce environmental uncertainties. Larger boards may provide an increased pool of expertise and better networking (Goodstein, Gautam & Boeker, 1994).

Sulong and Mat Nor (2009) claim that firms with smaller boards are associated with less efficient use of assets and lower firm valuation. Therefore, larger boards appear to be effective in their oversight duties relative to smaller boards. Large boards are often believed to be more capable of monitoring the actions of top management, because it is more difficult for CEOs to dominate larger boards (Zahra & Pearce, 1989). Zainal Abidin et al. (2009) also evidenced that larger board size contributes more towards firm performance as a whole. Larger board means that there are more ideas and skills that can be shared among board members.

On the other hand, another strand of the literature supports the view that large boards are value reducing because large boards make coordination, communication and decision making more complicated and, hence, less efficient (Yermack, 1996; Eisenberg, Sundgren & Wells, 1998). Larger decision-making groups are less cohesive (Shaw, 1981) and experience a decrease in the level of motivation and satisfaction due to a lack of participation that often characterizes larger decision-making groups (Jewel & Reitz, 1981). Judge and Zeithaml (1992) found that larger boards were less likely to become involved in strategic decision-making. Larger groups are more difficult to coordinate due to the large number of potential interactions among group members (Gladstein, 1984). Finally, larger groups can increase the group conflict (O'Reilly, Caldwell & Barnett, 1989). Similarly, Singh and Harianto (1989) suggest that larger boards can make it more

difficult for the CEO to obtain consensus. It is more difficult to coordinate because of the large number of potential interactions among group members (Forbes & Miliken, 1999).

Studies claim that a small board is more effective than a larger board in making executive replacement decisions. However, the authors add that due to the small number of group members, the source of information, experience and contact with outside parties will be limited, which may cause small groups difficulty in finding suitable candidates for replacements, especially from outsiders (Borokhovich, Brunarski, Donahue & Harman, 2006). A larger board is unlikely to facilitate effective monitoring of the top management of a firm (Jensen, 1993). Thus, smaller board size is more effective in limiting the directors' incentives to shirk, as it is easier to monitor each member and decisions can be made more quickly (Haniffa & Hudaib, 2006).

Few studies specifically focus on board size in family companies. Family firms have slightly smaller boards and lower board independence than non-family firms (Chen, Chen & Cheng, 2008). The smaller board size may be due to a trade-off between growth and risk exposure faced by the firms. This is because a high concentration of shares in the hands of a few shareholders (Gorriz & Fumas, 1996). Expert studies do evidence a negative relationship between board size and firm performance. Yermack (1996) conducted an empirical study on the performance effect of board size for a sample of 792 companies across eight years (1984-1991). The main finding shows a clear inverse relation between firms' market valuation and the size of the board of directors. In another study by Mishra et al. (2001) in Norway, it was found that large boards are not as

effective as small boards. Firms with a smaller board size achieve higher Q values. Similarly study in Finland (Eisenberg et al., 1998), in UK (Carline, Linn & Yadav, 2002) and in Singapore and Malaysia (Mak & Yuanto, 2002) evidence that board size is inversely related to company.

On the other hand, research evidence that performance value is strong and positive in smaller firms (Feris, Jagannathan & Pritchard, 2003; Dalton, Daily, Johnson & Ellstrand, 1999). A recent study in Asia (Hong Kong, Taiwan, Singapore and Malaysia) evidenced that board size is significantly higher in family-owned companies in Asia (Chen & Nowland, 2010). This explains that board monitoring in Asian countries is weak. This finding is consistent with previous studies that board governance practices are weaker in family-owned companies (Anderson & Reeb, 2003; Chen et al., 2008).

2.5.2 Board independence

The degree of board independence is closely related to its composition. The board is presumed to be more independent as the number of non-executive directors increases proportionately. A board is independent when there are a significant proportion of independent non-executive directors (Hillman & Dalziel, 2003). Indeed, corporate governance in the US has increasingly shifted towards "independent" boards with a majority of non-executive (independent) directors. The greater the proportion of non-executive directors, the better the stock market's reaction to their firm's tender offers for other firms (Byrd & Hickman, 1992). Rosenstein and Wyatt (1990) evidenced that stock

prices increase about 0.2% when a company appoints an additional non-executive director. Firms that substantially increased the proportion of independent directors had above-average stock price returns (Denis, Denis & Sarin, 1997). It is claimed that boards should comprise a substantial majority of "independent" directors who are free from commercial or personal ties that could impair their ability to probe and challenge management (Felton & Watson, 2002).

The Code (2000), Part 2, AA (III) defines board balance as non executive directors should be persons of calibre, credibility and have the necessary skill and experience to bring an independent judgement to bear on issues of strategy, performance and resources including key appointments and standards of conduct. To be effective, independent non-executive directors need to make up at least one third of the membership of the board (p. 69).

Bursa Malaysia Listing Requirements, Part B 15.02 states listed issuer need to comply to the requirements that are: (1) A listed issuer must ensure that at least 2 directors or 1/3 of the board of directors of a listed issuer, whichever is the higher, are independent directors, (2) If the number of directors of the listed issuer is not 3 or a multiple of 3, then the number nearest 1/3 must be used, (3) In the event of any vacancy in the board of directors, resulting in non-compliance with subparagraph (1) above, a listed issuer must fill the vacancy within 3 months.

Experts argue that non-executive members bring fresh perspectives, objectivity, openness and new directions (Aronoff & Ward, 2002). Bonn (2004) found that Australian firms show that the non-executive director ratio and female director ratio were positively associated with firm performance. Female directors that possess exceptional attributes or qualifications enhanced the firm performance. Chouchene (2010) research in French market evidenced that when the part of capital represented on the board and held by the coalition of control is low, the presence of independent directors is more important. Empirical study in the US shows that board independence is negatively related to firm performance (Hsu, 2010).

A study by Abdullah (2001) also evidenced that Malaysian boards are generally dominated by non-executive directors. Survey done by MSWG-NUBS (2007) evidenced that only 94.5% of companies conform to the recommendation made by the Code and Listing Requirements 15.02. Further Zainal Abidin et al. (2009) found that a higher proportion of independent non-executive directors on the board have a positive impact on firm performance. This is because independent directors possess a diverse background, attributes, characteristics and expertise, which may improve board processes and decision making, and consequently firm performance. Empirical study also reveals that firm-boards with a high representation of outside and foreign directors are associated with better performance compared to those firm-boards that have a majority of insider executive and affiliated non-executive directors (Ameer, Ramli & Zakaria, 2010). In India, Jackling and Johl (2009) evidence that a greater proportion of outside directors on board were associated with improved firm performance. Larger board size has a positive

impact on firm performance thus supporting the view that greater exposure to the external environment improves access to various resources and thus positively impacts on firm performance.

Another study in Malaysia by Ponnu and Karthigeyan (2010) claim that there is no convincing evidence that show outside directors positively effect on corporate performance. It is also consistent with findings by Yammeesri and Herath (2010) in Thailand that neither independent directors nor grey directors are the significant determinants of improving firm value. Study in India by Kota & Tomar (2010) also evidenced that non-executive independent directors are failing in their monitoring role.

In family firms, the representatives of non-family owners on the board could offer a functional counterpoint in decision-making. Ward and Handy (1988) found that 88% of firms using non-executive directors believe that their boards are more useful and valuable compared to 68% of those using executive boards expressing the same view. As argued by Gilson and Kraakman (1991), "corporate boards need directors who are not merely independent (of management), but who are accountable (to shareholders) as well". Kosnik (1987), and Singh and Harianto (1989) argue that non-executive directors are more likely to be objective, independent and more capable of resisting self-interested efforts by executive directors to influence board decisions.

In contrast, a high proportion of non-executive directors on boards, have drawbacks. It is argued that boards dominated by non-executive directors could create stifling strategic

actions (Goodstein et al., 1994), excessive monitoring (Baysinger & Butler, 1985) and lack real independence (Demb & Neubauer, 1992). Experts (Agrawal & Knoeber, 1996; Hermalin & Weisbach, 1991; Franks & Mayor, 2001) also support the view that non-executive directors are usually characterized by a lack of information about the firm, do not bring the requisite skills to the job and prefer to play a less confrontational monitoring role. Some argue that non-executive directors are obligated to the owner-manager and, therefore, not free of political pressure (Alderfer, 1988). In family-controlled firms, controlling family members may appoint directors to the board, and, thus, the independence of directors may be compromised by their familiarity with family members (Chen & Jaggi, 2000; Leblanc & Gillies, 2005).

Johl, Jackling and Joshi (2010) found that Indian directors are not truly independent. They were found not doing their jobs and roles. Further, over time, independent directors who have served for too long, become less vigorous monitors (Bhagat & Black, 2002). Sulong and Mat Nor (2009) found that independent non-executive directors perform a weak governance function in Malaysia. The CEO of MSWG, Rita Benoy Bushnon reported that the independent directors that stayed in a particular company for a very long time tend to develop a "buddy" relationship with management, and thus find it is difficult to retain their independent judgement of the company affairs. Hence, directors need to come from diverse backgrounds in term of gender, race and expertise (Meng, 2009).

There are also studies that are not able to confirm that the presence of non-executive directors can enhance firm performance. It is not clear whether non-executive directors

make better or worse decisions (Weisbach, 1988). Few researches (Fosberg, 1989; Chin, Vos & Casey, 2004; Klein, Shapiro & Young, 2005) do not show any relationship between the presence of non-executive directors on the board and firm performance. Management may succeed in getting non-executive directors elected to the board, but he/she may be incapable or unwilling to properly discipline management. A high level of board independence does not automatically lead to better performance.

Besides the composition of non-executive directors, the proportion of family member representation might also influence the firm performance. In countries where families have substantial equity holdings, there is generally little physical separation between those who own and those who manage the capital (Nicholls & Ahmed, 1995). In Malaysia, there are a number of listed companies with substantial family shareholdings that elect family members to sit on the boards. The boards of family-controlled companies are dominated by family members or their close friends, and there are few truly independent directors. Even though for years there have been calls for independent boards, to date, it is not happening yet in a big way (Meng, 2009).

Despite the fact that non-executive directors can bring a new dimension of experience and objectivity that may not be found among family directors and managers, family firms do not generally employ non-executive directors (Young, Tsai & Hsieh, 2008). Generally, family firms have fewer shareholders and directors than non-family firms (Cromie, Stephenson & Montieth, 1995). Abdul Samad et al. (2008) claim that family companies appoint fewer independent directors to be on the board compared to non-

family companies. Ward (1991) argues that the owners of family firms are reluctant to appoint independent directors because they are afraid of losing control; disbelieve that non-executive directors understand the firm's competitive situation; afraid of opening up for new, external ideas and viewpoints; and that board work steals a lot of time from more urgent, operational issues.

2.5.3 Director's education background

Experts claim that individuals with higher qualification are better at managing the firms. There is a positive relationship between individual education and conflict over money, management control and strategic vision. Educated individuals are found to understand financial matters more than their less educated counterparts. Directors that are educated are better at handling the problems and situations that may arise in the firms (Sebora & Wakefield, 1998).

Education is an investment in knowledge and, as a consequence, it increases productivity (Schultz, 1971). Economies with well educated employees exhibited faster progress and more rapid increases in efficiency and productivity than those with lower level of education (Becker, 1962). Study by Romer (1994) claims that education and professional training strengthens endogenously the growth rate by increasing labour quality and productivity. Further, Schultz (1993) pointed out that the evolution of knowledge contributed decisively in the growth rates of organizations. Employees that possess particular capabilities such as communication and decision skills, problem solving skills,

team working skills, as well as adaptation in the continuous learning environment and tend to behave more professionally in their daily tasks (Agiomirgianakis, Asteriou & Monastiriotis, 2002; Psacharopoulos & Patrinos, 2004).

Chen, Cheng and Hwang (2005) using data from Taiwan listed companies showed that intellectual capital contributes significantly to firm profitability. Similar results were also obtained by Switzer and Huang (2007) for a sample of mutual funds in Canada. They found that the performance of mutual funds is directly related to managerial human capital characteristics.

Educational background and skills may influence family firms' performance. Additionally, a family's special technical knowledge concerning a firm's operations may put it in a better position to monitor the firm more effectively. Family members have an incentive to counteract the free rider problem that prevents atomised shareholders from bearing the costs of monitoring and ultimately reduces the agency costs (Castillo & Wakefield, 2006). Also, higher quality management passes on the true value of the firm to investors and reduce the information asymmetry (Chemmaur & Paeglis, 2005).

Directors' educational backgrounds enable to supplement management in strategy evaluation (Ruigrok, Peck, Tacheva, Greve & Hu, 2006). Directors' expertise such as in accounting, financing, consulting and law supports managers in making decisions. Therefore, directors' expertise can have a certain effect of firm value (Hillman, Cannella & Paetzold, 2000). Erikson, Park, Reising and Shin (2005) found that bank directors with financial and accounting knowledge monitor managers more effectively.

In contrast, Srivastava & Lee (2008) conducted a study in the US to examine the relationship between firm performance and top management team age, tenure and education. They found that top management teams have a weak relationship with firm performance. This suggests that directors' knowledge, decision-making skills and leadership traits were not captured by the demographic variables.

2.5.4 Director's expertise

A director is an expert if he/she has a great skill or knowledge in a particular subject/area (Oxford English Dictionary, 2009). The revised Malaysian Code on Corporate Governance (2007) stresses that nominating committees should consider recruiting directors that have skills, experience and qualifications. Research also notes that expertise may affect the firm's performance. Companies should look for superior quality directors to monitor management (Fairchild & Li, 2005). Directors' background and competency are essential factors as they could contribute positively to the family firms (Johannisson & Huse, 2000). Consulting skills is a combination of diagnostic and behavioural skills that enable professionals to collaborate with line managers to develop solutions for business performance problems (Green, 2008).

As a professional, it is necessary to be competence and master the knowledge and apply it to specific business settings (Brockbank, Ulrich & Beatty, 1999). Lawler and Mohrman (2003) argued that professionals need to become more effective strategic business

partners. By having these characters, thus indirectly these professionals could positively influence the value of the company.

Kesner (1988) found that most directors' occupations are business executives, followed by lawyers, consultants, and school professors. Directors' expertise such as in accounting, financing, consulting and law supports managers in making decisions. Therefore, directors' expertise can have a certain effect on firm value (Hillman, Cannella, & Paetzold, 2000). Lang and Lockhart (1990) found that firm interlocking with financial institutions is positively related to financial performance. Erickson et al. (2005) evidenced that bank directors with financial and accounting knowledge monitor managers more effectively. Therefore, bank directors increase firm value, measured by Tobin's Q.

A number of studies suggest that those directors who sit on several corporate boards have developed reputation capital as experts (Fama & Jensen, 1983). Organizational theory suggests that experienced non-executive directors are more likely to contribute to board effectiveness (Westphal & Milton, 2000). Experts that are outsiders are more effective in monitoring the board and firm performance (Useem, 1993). The independent non-executive directors that hold outside directorships of other "unconnected" listed companies are experienced directors (Kosnik, 1987; Gul & Leung, 2004). A study of 385 Hong Kong companies found that non-executive directors who are experts moderate the CEO duality or corporate disclosures relationship (Gul & Leung, 2004).

Dalton et al. (1998) contend that directors whose is derived from a professional or business relationship may be highly effective at the resource dependence and counselling/expertise board roles due to their industry contacts, business acumen, specialized knowledge and skills. They are appointed as board members so that the firm can tap into the resources that they bring. Similarly, Anderson and Reeb (2004) posit those directors that have skills in knowledge-based fields such as law; finance, accounting and consulting, and they are sought after their value-adding advice and counsel.

Following the recent wave of accounting scandals, regulators have stressed the need for more financial experts on boards. For example, Agrawal and Chadha (2005) found that having directors with a CPA, CFA or similar degree on audit committees translates into fewer earnings restatements. Defond, Hann and Hu (2005) document a positive stock market reaction to the appointment of directors with accounting knowledge to the audit committees (though not to the appointment of other financial experts). Guner et al. (2008) claims that finance experts significantly affect the finance and investment policies of the firms on whose board they serve. However, the impact of financial experts on shareholder value is difficult to assess and it does not seem to improve when financial experts join the board of directors.

At the same time, firms are facing a challenge in searching for qualified and competent directors to sit on the boards (Hendry, 2002; Hartvigsen, 2007). A survey conducted in America by Ernst & Young found that many firms in Europe and America complain that

they struggle to find experts to be board members. TIAA-CREF and other pension funds in the US required companies to create boards that are "composed of qualified individuals who reflect the diversity of experience" (Forbes, 1995). Thus, many boards in the US have appointed directors with experience from other firms and industries (Westphal & Milton, 2000).

Actually there is no shortage of qualified directors, however, stringent laws and rules pertaining to directorship and litigation by shareholders make directors more careful in accepting their job (Raber, 2005). Companies can no longer be satisfied with directors who simply put in a token appearance. Companies seek qualified directors, together with their expertise (Berube, 2005). Furthermore, Michael Powers, leader of Hewitt's executive compensation group, also claim "...there is a struggle-taking place between the growing need for qualified directors and the reluctance of directors to join the boards." A report from Christian & Timbers in New York also reflects the tough competition when searching for qualified non-executive directors (Bates, 2003).

2.5.5 Leadership structure

In Malaysia, The Code (2001) Part 2, AA (II) elaborates that for Chairman and Chief Executive Officer, there should be a clearly accepted division of responsibilities at the head of the company, which will ensure a balance of power and authority, such that no one individual has unfettered powers of division. Where the roles are combined there

should be a strong independent element on the board. A decision to combine the roles of Chairman and Chief Executive should be publicly explained (p. 69).

The leadership structure of a company can either be separate or dual. Duality arises when the post of CEO and Chairman are managed by one person. Separate leadership refers to the positions of the Chairman and the Chief Executive Officer (CEO) being held by two different individuals. Usually the Chairman conducts the meeting, is responsible for agenda setting, controlling the discussion and allowing for appropriate discussion of important matters. The CEO role is to manage and run the to-day business. Whether the role of the Chairman should be separate from the role of the CEO has become a matter of debate. The Code (2001) suggests that there should be a clearly accepted division of responsibilities at the head of the company between the Chairman and CEO, which will ensure a balance of power and authority. When the roles are combined, there should be a strong independent element on the board. A decision to combine the roles of the Chairman and CEO should be publicly explained.

A PricewaterhouseCoopers (1998) survey shows that the majority of Malaysian companies practice separate roles for the board Chairman and CEO. A study by Abdullah (2001) found that 78.6% of firms had separate leadership in year 1994 to 1996. The percentages of firms that exercise separate leadership increased to 89% by 1995 (Che-Ahmad et al., 2003). About 62% of Chairmen were non-executive directors and 31% of the companies practice dual leadership (Ishak, 2004). A survey conducted by MSWG-NUBS (2007) shows that 82% of companies had a clear separation of responsibility

between Chairman and the CEO. Recent study by Zainal Abidin et al. (2009) also seen that 70.7% of the companies do practise separate leadership structure.

In addition, the agency prescription of independent board leadership where a non-executive is a Chairman is associated with higher firm performance (Berg & Smith, 1978; Rechner & Dalton, 1991; Daily & Dalton, 1994). Indeed, the presence of non-executive chairmen and non-CEO presidents improves firm valuation, thereby giving credibility to the view that CEOs should be prohibited from serving as chairmen of the board (Yermack, 1996).

In contrast, Rechner and Dalton (1991) found that firms where the CEO serves as Chairman have higher ROE, ROI and profit margins. Boyd (1995) claims that the role of duality could increase the US firm performance. This is because separate leadership dilutes the top management power and increases the probability of conflict between the board of directors and management (Anderson & Anthony, 1986; Alexander, Fennell & Halpern, 1993). According to Haniffa and Cooke (2000), the management of a firm will be more efficient with duality leadership because of less bureaucracy and a decrease in information asymmetry. In India, Kota and Tomar (2010) found that CEO duality structure contributes positively and significantly to firm performance in medium-sized companies. These findings were in line with stewardship theory that managers are inherently trustworthy and are good stewards of company resources.

Duality leadership is a common practice in family firms despite the documented advantage of exercising a separate leadership structure (Chen, Cheung, Stouraitis & Wong, 2005). The reason being that family companies feel that founder-CEOs are more concerned about the survival of their firms and protecting their legacy for future generations. In the US, some firms practices duality leadership in order to focus on the company's leadership. Radice (1971) found that firms managed by the same owner-manager achieve higher profits than firms with separate control and ownership. Donaldson and Davis (1991) also evidenced that the average ROE for firms with duality are higher (14.8%) than firms that practise separate leadership (11.5%).

However, studies have found that founder-managers that practise duality leadership could create even more serious agency problems in the companies (Schulze, Lubatkin, Dino & Buchholtz, 2001). Although some studies claim that there is an increasing trend of CEO-duality in Malaysia, from 8.8% in 1996 to about 17.9% in 1999, firms with CEO duality do not to perform as well as their counter-parts with separate board leadership (Abdul Rahman & Mohd Haniffa, 2005). Research also found that family-controlled businesses that practise separate leadership outperform family-controlled businesses with duality leadership (Amran & Che-Ahmad, 2009).

However, other studies do argue that separating the roles of the CEO and Chairman positions seems to be inapplicable to Malaysian listed firms. Chang and Shazali (2005) have provided possible explanations for the occurence of such a scenario. For example, they have argued that a strong dominant CEO may be essential for a developing economy

where the system may be dependent on a few powerful corporate players to push the firm performance (Sulong & Mat Nor, 2009). The non-family firms gain more profitability when duality exists on the board (Abdul Samad et al., 2008).

Locally, Abdullah (2004) claims that leadership structure does not influence firm performance. Rechner and Dalton (1989) examined shareholders returns over five-year period (1978-1983) and found no significant distinction between the performance of separated and combined leadership. In addition, others suggest there is no significant difference in firm performance between executive and non-executive chaired boards (Chaganti, Mahajan & Sharma, 1985; Molz, 1988).

2.5.6 Ownership structure

Ownership structure is an important factor in shaping the corporate governance system. The degree of ownership concentration in a company is determined based on the distribution of power between its managers and shareholders. The concentration of ownership is beneficial to companies as large shareholdings allow for greater monitoring of managers (Jensen & Meckling, 1976). Thus, the absence of separation between ownership and control reduces conflicts of interest and increases the shareholders value (Morck, Shleifer, & Vishny, 1988).

The ownership structure is also a primary determinant of the agency problems between controlling insiders and outside investors which has an important implication for the

valuation of the firm (Lemmons & Lins, 2003). The controlling insiders can potentially disadvantage outside investors by diverting resources for their personal use or by committing funds to unprofitable projects that provide private benefit but reduce the firm's value. Alternatively, by investing resources in good projects, the firm's value increases and the insiders can increase their wealth in proportion to their claims on the firm.

Studies found that concentrated ownership is more pronounced in Continental Europe, East Asian countries, Latin America and Africa, which have inadequate shareholder protection (La Porta et al., 1998). Concentrated ownership generally serves the interests of diffused shareholders, and if the concentrated owner can achieve their consumption goals more effectively through the firm than private, the welfare of the diffused owners may be threatened (Demsetz & Lehn, 1985). Cho and Kim (2007) examined 600 Korean firms in 1999. The findings show that the Korean firms exhibit an owner-controlled governance structure. The managers of Korean firms are either owner-managers or dependent on controlling shareholders. In the UK, it is found that ownership has a direct impact on corporate performance (Ezzamel & Watson, 1993). Higher concentrated ownership leads to higher firm profitability (Kapopoulos & Lazaretou, 2007). Kirchmaier and Grant (2005) conducted a research on European countries (Germany, UK, Spain, Italy, France) and reveal that ownership varies considerably across the largest European economies and ownership has a significant impact on firm performance.

A study on 203 Turkish firms in year 2005 found that ownership is highly concentrated in Turkey. The unlisted holding companies have the highest average percentage of shares, which supports the belief that individuals or families establish the holding companies in order to control their listed firms (Mandaci & Gumus, 2010). In East Asian, companies are usually controlled by families or the State. Controlling shareholders have power, primarily, through the use of pyramids and participation in management (La Porta et al., 1999). A study by Claessens et al. (2000) in nine East Asian countries (Hong Kong, Indonesia, Japan, South Korea, Malaysia, the Philippines, Singapore, Thailand and Taiwan) reports that more than two thirds of the firms are controlled by a single shareholder. About 60% of concentrated firms' top management is related to the family of the controlling shareholder and there is extensive family control in more than half of East Asian firms. Yammeesri and Lodh (2004) studied 243 non-financial firms listed on the Stock Exchange of Thailand for the years 1993 to 1996. They found that firms with controlling ownership have higher performance than those with non-controlling ownership. Results also show that family-controlling ownership has a positive and significant relationship to firm performance.

The ownership structure in Malaysia is more concentrated and the shares are held by the state, families or individuals. In 1997, the trend of ownership structure held by the nominee companies was 45.6% of the total shares held by the top five shareholders. However, the ownership pattern has changed little over time and the majority of shareholdings by the nominee companies and institutions are owned by families (Zhuang, Edwards & Capulong, 2001). Reports on the Observance of Standards and Codes

(ROSC) by the World Bank indicate that 67.2% of the shares in Malaysia were in family hands, 37.4% by controlling shareholders and 13.4% were state controlled. A study by Hui (1981) found that 0.8 % of shareholders owned 69% of all shares in the 62 largest Malaysian firms between 1974 and 1976. La Porta et al. (1998) evidenced that 54% of ownership is owned by the three largest owners who were from the ten largest Malaysian non-financial listed companies. The findings by Hui (1981), La Porta et al. (1998) and Zhuang et al. (2001) demonstrate that Malaysian firms have a high degree of ownership concentration. A survey conducted by PricewaterhouseCoopers (1998) shows that almost 97% of Malaysian PLCs are substantial shareholders[3] with 33% of them involved in management. Abdullah (2001) found that the single largest shareholder hold 36% of the firm's shares. Che-Ahmad et al. (2003) studied on 236 PLCs in 1995 and found that the block-holders hold 60.75% of company ownership. A study by Abdullah and Mohd-Nasir (2004) determined that the average shareholding by the top 20 shareholders is 73%. Tam and Tan (2007) claim that concentrated ownership affects firm performance. Firm characteristics such as firm age, size and sector also influence firm performance. Study by Zainal Abidin et al. (2009) also shows that directors in Malaysia have sizeable ownership stakes in the company compared to their counterparts in Western economies such as Sweden and the UK (Ho & Williams, 2003). This is perhaps due to higher number of family-owned and managed companies in Malaysia.

[3] A substantial shareholder is defined as having at least 5% (direct or indirectly) of the aggregate of nominal amounts of all the voting shares in the firm as defined in Section 69D, Companies Act 1965.

Therefore, there are few actions taken by the regulatory bodies such as when the SC announced in February 1998 a revision to the regulations governing the distribution of shareholdings of companies seeking listing on the BM. Companies seeking main board listing are required to ensure that at least 25% of shares are held by a minimum number of dispersed public shareholders holding not less than 1,000 shares each. The minimum number is 750 or 1,000, depending on whether a company has a paid-up capital of less or more than (RM) 100 million[4]. Thus, the imposition of rules and regulations by regulatory bodies does help protect minority interest rights.

2.5.6.1 Managerial ownership

Jensen and Meckling (1976) argued that high concentration may give rise to agency problems that may occur between the shareholders and managers. In order to minimize the agency problems, managerial ownership is a way to curb agency problems. Significant managerial ownership can align managers' interests with those of the outside shareholders so that managers can have strong incentive to pursue value-maximizing behaviour (alignment effects). In contrast, Demsetz (1983) argued that too large an ownership stake by managers could potentially lead them to worry more about their own interests, not those of outside shareholders, hence decreasing the firm's value (entrenchment effects).

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[4] KLSE Listing Requirements, paragraph 8.15 (1) and (1A).

Research has found that there is a linear relation between firm performance and managerial ownership structure (Demsetz & Lehn, 1985). Jensen and Meckling (1976) suggest the alignment-of-interest hypothesis. Due to a reduction of agency costs, this hypothesis predicts that firm value and operating performance increases as management ownership rises. Jensen and Meckling (1976) explain that when managerial ownership increases, there is greater alignment of interests of managers and outside shareholders. Managerial ownership and firm performance is observed having a positive relationship when ownership is below 5% (Holderness, Kroszner & Sheehan, 1999).

However, at certain levels of equity ownership, managers' consumption of perquisites may outweigh the loss they suffer from a reduced value of the firm. A high level of managerial ownership in a high information asymmetry environment allows managers to indulge preferences for non-value-maximizing behaviour. Therefore, the entrenchment hypothesis predicts a negative relation between operating performance and managerial ownership (Demsetz, 1983; Fama & Jensen, 1983). Study evidences that at sufficiently high levels of managerial ownership, managers become entrenched in their positions resulting in a negative relation between managerial equity ownership and firm valuation (Stulz, 1988).

There are also studies that evidence negative relationship between managerial ownership and company performance (Mandaci & Gumus, 2010; Fahlenbrach & Stulz, 2010). Mandaci & Gumus (2010) evidence the managerial ownership has a significant negative effect on Tobin's Q. Their findings support argument made by Demsetz (1983) that states

too much managerial ownership could potentially lead managers to worry more about their own interests and decrease firm value. A study in the US found that on average, managerial ownership is significantly negative every year (1988 to 2003) for American firms. In this study, firm value was measured using Tobin's Q. Managers are more likely to significantly decrease their ownership when their firms are performing well, and more likely to increase their ownership when their firms become financially constrained (Fahlenbrach & Stulz, 2010). Mat Nor and Sulong (2007) argue that when managers own a smaller portion of the organisation's share, they have greater incentive to pursue personal benefits and less incentive to maximise organisation value. Thus, to reduce the agency costs is to increase the shares held by the managers.

More recent research accounts for both the alignment and entrenchment hypotheses by considering a nonlinear relationship between managerial ownership and firm performance. Experts found that when Tobin's Q was used as a proxy of firm value, 'the alignment of interest' occurs at low levels of managerial ownership but with 'entrenchment' at high levels (Morck et al., 1988; McConnell & Servaes, 1990; Hermalin & Weisbach, 1991). Morck et al. (1988) found that the alignment hypothesis effects are dominant within the 0 to 5% range and above the 25% level, and that the entrenchment effect is dominant within the 5 to 25% ownership range. McConnell and Servaes (1990) propose a quadratic model in which the coefficient on managerial ownership is expected to be positive while the coefficient on managerial ownership^2 is expected to be negative. However, they do not support the entrenchment findings by Morck et al. (1988) at the intermediate ownership level.

Subsequently, Short and Keasey (1999) argue that a cubic model better describes the transition between alignment affects to entrenchment affects and back to alignment. The coefficients on ownership and ownership cubic are expected to be positive, while the coefficient on ownership-squared is expected to be negative. Their evidence supports the cubic model of ownership structure to describe firm performance. The findings are consistent with Morck et al. (1988). The entrenchment effect take place when managerial ownership is between 16% and 42%, which is slightly different from the 5% to 25% of Morck et al. (1988). Stulz (1988) demonstrates that at sufficiently high levels of managerial ownership, managers become entrenched in their positions resulting in a negative relation between managerial ownership and firm value.

Rose (2005) argues that managers who control a substantial part of the firm's equity may be able to have sufficient influence to secure the most favourable employment conditions, including an attractive salary. Accordingly, the insiders who control corporate assets can potentially expropriate outside investors by diverting resources for their personal use or by committing funds to unprofitable projects that provide private benefits (Lemmon & Lins 2003). There are also studies that found ownership does not influence firm value. Demsetz and Lehn (1985) note that there is no relation between ownership concentration and corporate profits. Another study by Demsetz and Villalonga (2001), found that ownership structure has no impact on Q.

Managerial ownership is a common feature in Malaysia firms. Claessens et al. (2000) found that at the 20% cut-off levels, 67% of Malaysian listed firms were in family hands,

and 85% had owner-managers. Ali Ahmed (2009) points out that there is a positive association between managerial ownership and Malaysian firm performance. It is further supported by Mahmud, Muhd Kamil & Pok (2010) that managerial ownership has significantly positive association with firm performance measured using Tobin's Q and ROA which is consistent with the convergence-of-interest hypothesis. On average, 26% of shares issued by Malaysian firms are held, directly or indirectly by directors.

Local studies have found that when the directors' ownership is at a range of 5% to 25%, the financial performance (except for EPS) is significant. However, at other range, there is no relationship between ownership and performance (Mat Nor et al., 1999). Empirical studies by Mohd Sehat and Abdul Rahman (2005) report that concentrated ownership has a tendency to increase the firm value. Concentrated ownership coincides with a lack of investor protection because shareholders who are not protected from controllers will seek to protect themselves by becoming controllers. The implication of the significant positively relation between concentrated ownership and firm value is that large shareholders/ investors have an incentive to monitor management and solve the free-rider problem.

Yarram and Balachandran (2005) studied on Bursa Malaysia non-financial companies in 2004. They found that Tobin's Q has no significant influence on managerial ownership. One possible explanation for their finding could be that managers in Malaysia probably do not believe that they can derive higher payoff in unstable environment by holding higher degree of shareholding. Perhaps, political connections may have a pervasive influence on

corporate decisions in Malaysia (Johnson & Mitton, 2003). Another research evidenced that managerial ownership is less important in large-sized firms compared to small-sized firms. Large-sized firms demand and use better corporate governance mechanisms due to higher agency conflicts, and therefore, less managerial ownership is needed for control (Mohd Ali, Mohd Salleh & Hassan, 2008).

2.5.6.2 Family managerial ownership

Family ownership is prevalent in most countries around the world. In the US, families present one-third of the S&P 500 and account for 18% of outstanding equity. It is found that there is a nonlinear relationship between family holdings and firm performance (Anderson et al., 2003). Most of the firms are family firms whereby the legal control of voting stock is held by one or a few families who are either related in some way or share a certain degree of affinity or alliance (Corbetta, 1995). Faccio and Lang (2002) note that firms in the UK and Ireland are 44.29% controlled by families. A research conducted by Franks and Mayers (2001) reports that family shareholdings account for one-third of total shareholdings in Germany and Andres (2008) found that 63% of shares are owned by families in German market.

A study conducted in German using panel data on 275 German exchange-listed companies, with the aims of examining the relationship between founding-family ownership and firm performance. By separating the family effect from general block holder effects, it is evidenced that family firms are not only more profitable than widely-

held firms but also outperform companies with other types of block holders. However, the performance of family businesses is only better in firms in which the founding-family is still active either on the executive or the supervisory board. These findings suggest that family ownership is related to superior firm performance only under certain conditions. If families are just large shareholders without board representation, the performance of their companies is not distinguishable from other firms. In addition, the results indicate that other block holders either affect firm performance adversely or have no detectable influence on performance measures (Andres, 2008).

Families also have a strong incentive to decrease agency costs and increase the firm value. Concentrated shareholders have a strong economic incentive to monitor managers and decrease agency costs (Demsetz & Lehn, 1985). Since families have usually invested most of their private wealth in the company and it is not well-diversified, families are more concerned with firm survival and have a strong incentive to monitor management closely. Monitoring costs tend to be lower in companies controlled by family than by non-family (Fleming, Heaney & Rochelle, 2005; Fama & Jensen, 1983). Anderson et al. (2003) show that family firms enjoy a lower cost of debt financing compared to non-family firms. This is because families have a committed, undiversified stake in the company and induce a strong incentive to monitor, as the company survival and its value maximisation is important for them. The unique interests associated with the long-term family commitment explain that family ownership is an organizational structure that decreases the conflict between shareholders and themselves, thus, protecting their interests.

However, it cannot be denied that family companies with a concentrated ownership pattern do face agency problems between the controlling shareholders and the minority shareholders and the threat of expropriation of minority shareholders' rights may become reality. Family companies can make sub-optimal investment decisions since the interests of the family are not necessarily in line with those of other shareholders (Fama & Jensen, 1985). Moreover, restricted ownership reduces external governance and highlights the problems of self-control that arise when a firm is headed by a powerful owner/ manager or because family relationships tend to make agency problems more difficult to resolve (Schulze et al., 2001). There is a possibility that family firms might use their concentrated ownership to expropriate wealth from other shareholders (Morck, Strangeland & Yeung, 2000). Instead of maximizing firm value, entrenched families might have an incentive to exchange profits for private rents and thereby expropriate minority shareholders (Faccio et al., 2001; Morck & Yeung, 2003). The expropriation of minority shareholders' rights can only be curtailed and safeguarded if the management is separated from ownership or there are proper corporate governance mechanisms in place to check for any abuse of power.

Achmad, Rusmin, Neilson and Tower (2009) conduct a study for Indonesian manufacturing firms in year 2003 to 2006. The findings reveal that the presence of high concentrated shareholdings by family members might lower corporate performance (when measured using ROA). Family firms tend to act in the interest of family members, which lead to expropriation of wealth from the non-families shareholders.

A study conducted in Taiwan by Chu (2009) on 786 public family firms during 2002 to 2007. Results show that family ownership is positively associated with the performance (measured using ROA). The positive association is strong particularly when family members serve as CEOs, top managers, chairpersons, or directors of the firms; however the association becomes weak when family members are not involved in firm management or control. The findings suggest that the potential family-ownership effects are more likely to be realized when family ownership is combined with active family management and control.

Next, research done by Lin and Chang (2010) in Taiwan found that there are three threshold effects between family ownership and firm value. These are 0.075%, 31.76% and 33.61%. When family ownership is less than 0.075%, Tobin's Q decreases by 257.71%, with a 1% increase in the family ownership. On the other hand, Tobin's Q increases by 0.78% when the family ownership is between 0.075% and 31.76%. Hence it has a 1% increase in the family ownership. Tobin's Q increases by 1.67% with a 1% increase in the family ownership when the family ownership is between 31.76% and 33.61%. However, Tobin's Q increases by 0.51% with a 1% increase in the family ownership when the family ownership is greater than 33.61%. They therefore conclude that there must be an optimal family ownership between 31.76% and 33.61% because it is at this level when firm value is maximized. These results support the view that family ownership reduces the classical agency problem between managers and shareholders (Fama & Jensen, 1983).

Morck et al. (2000) argue that family ownership in Canada leads to poor financial performance. The entrepreneurial spirit and expertise are partly inherited and descendants gradually regress towards average talent and affect firm performance negatively. The family's role in selecting managers and members of the supervisory board also increase the entrenchment and may lower firm value since external parties can hardly capture control over the firm. Findings reveal that family control by heirs leads to slower growth because of inefficiencies that are due to entrenchment, high barriers against outside control and low investment in innovation. In line with these arguments, the high family stake reduces the probability of bidding by other external investors and leads to a lower market valuation (Barclay & Holderness, 1989). Shleifer and Vishny (1997) argue that the performance of family firms gets worse as firm age increases. The families, as large and undiversified investors, might pursue risk reduction strategies, thus, it indirectly affects firm performance.

La Porta et al. (1999) discovered that firms in Hong Kong are largely family controlled, and there are few widely-held firms. Since most firms are family-owned and controlled, the family ownership in Hong Kong affects performance. At a very high level of ownership, the entrenchment effect becomes dominant. This indicates that if the family ownership can be controlled and made use of appropriately, firm performance can be optimized. A firm with high ownership concentration should pay even more attention to improving corporate governance practices in order to enhance firm performance (Ng, 2005). In contrast, later studies show that there is no positive relationship between family

ownership in Hong Kong and firm performance using ROA, ROE or market-to-book ratio (Chen et al., 2005).

A study in India by Johl et al. (2010) evidenced that low family ownership leads to better performance, whilst high ownership is related to lower performance. This implies that the relation between family ownership and firm performance is not uniform across all levels of family ownership. As families have large control of the firm, the potential for entrenchment and poor performance is high. In contrast, Hamadi (2010) found that in Belgium, large shareholders in family firms have a positive impact on performance (measured using Q). However, when controlling shareholders in family firms gather in voting blocks, the effect turns out to be negative.

Meanwhile, most firms in Thailand are family owned and their businesses are financed by the family owned money. Individual or institutional investors typically hold small shares in the firms (Jelatianranat, 2000). Family-controlled firms have shown a significantly higher performance. The presence of controlling shareholders is associated with higher firm performance, when measured using ROA and the sales-asset ratio (Wiwattanakang, 2001). In Taiwan, there is a nonlinear relationship between family ownership and performance. The findings reveal that when family ownership is weak, the performance of family-control is low. A family needs only 15% equity on a listed firm to control the firms effectively. Thus, an effective ways of mitigating the ownership problem is when the family ownership is high but with low family representation on the

board. In this way, the conflict of interest between the majority and minority shareholders can be minimized (Yeh et al., 2001).

In Malaysia, empirical studies do discuss ownership and firm performance. Studies claim that listed firms in Malaysia are owned or controlled by family and that these companies appear to be inherited by their own descendants (Abdul Rahman, 2006). It is reported that nearly 67.2% of the Malaysian companies are owned by families (Claessens et al., 2000). The World Bank study in 1999 (as cited in Backman & Butler, 2003) on PLCs in Malaysia and other Asian countries, found that single shareholders control more than half of PLCs shares, and that families control at least 60% of PLCs shares. Specifically, 67.2% shares are owned by family firms, 37.4% are in the hands of only one dominant shareholder and 13.4% are state controlled. Thus, family-controlled dominate and control majority of the Malaysian capital market.

According to a survey done in 1996, family firms in Malaysia control almost 60% of PLCs (Soederberg, 2003) and the majority of Malaysian firms have an ultimate controlling owner, particularly an individual or family (Ishak, 2004). A study by Mohd Sehat and Abdul Rahman (2005) examined the ownership concentration from the perspective of direct shareholdings with a cut-off level for ownership of 5%. The results show that the average shares held by block-holders in the top 100 Malaysian listed companies was 55.84%. Thus, it can be concluded that ownership and control are highly concentrated in Malaysia. The concentrated ownership structure in Malaysia may be

influenced by the families' business style, culture, races and regulations imposed in Malaysia. For example, Bursa Malaysia only requires Malaysian PLCs to issue a small portion of shares to the public[5]. All companies need to issue at least 25% of the shares to the public, including the family businesses. Meanwhile the remaining shares can still be owned by family firms. Therefore, it is still possible that the remaining 75% of the company shares are held by family members. Families can remain as the controlling shareholders as long as they own the shares and control in the company.

2.6 Family succession

Several studies suggest that family companies need to plan for succession to ensure that they can last for the next generation (Trow, 1961; Ward, 1987; Handler, 1990; Kets de Vries, 1993; Wortman, 1994). The inability to transfer the company from one generation to the next generation is one of the major obstacles faced by the current generation of family members (Ward, 1987). In the US, most successful firms only survive about 24 years where the firm's founder runs the company. About 30% of family companies survive into the second generation (Beckhard & Dyer, 1983; Dyer, 1986) and 10% to 15% survive to the third generation (Applegate, 1994).

[5] KLSE Listing Requirements paragraph 2.08 and 8.15, Required Public Listing Spread, required listed company must ensure that at least 25% of its total shares are in the hand of a minimum 1,000 public shareholders holding not less than 100 shares each.

A study in the Netherlands by Floren (1998) evidenced that 28% of the family companies have defined succession procedures, while 47% of the family companies have no succession planning. The Dutch family firms treat succession as an incident rather than a planned and evolutionary process. However, 86% of Italian entrepreneurs believe that a group of family members will be owners in the next generation, while 54% of Italian entrepreneurs believe that a 'team at the top' will lead the company in the next generation (Corbetta & Montemerlo, 1999).

There are many factors that lead to unsuccessful succession. Some owners resist succession planning because they feel threatened, perhaps, by their fear of losing control, their desire to avoid preferential treatment of children, or because a loss of identity and power in the company may also result in a loss of standing within the community. Nevertheless, with advancing age, the inevitability of death, and the threat of debilitating illness tends to compel the owner to make preparation for the continuity of the family business (Harveston, Davis & Lyden, 1997).

The succession process should be initiated very early in the offspring's life (Ward, 1987; Stavrou, 1999). Founders that work with family members are more likely to have succession plans in mind and he/she will manage the family resources efficiently (James, 1999). A proper succession process affords family firms the opportunity to select effective leaders who are capable of rejuvenating their firms (Ward, 1987). In choosing a successor, the founder will find a suitable candidate, either his son or daughter. The acceptance of ideas from family stakeholders can create a sense of ownership from

family members, thus enhancing the chance of a smooth and satisfactory succession (Morris, William & Nel, 1996). In addition, family members that are closely related to the owner or manager can occupy a higher role or position in the company, thus, the family members can collectively influence the extensiveness of the succession planning process (Davis & Harveston, 1998).

2.6.1 Succession planning in Malaysia

In Malaysia, the majority of family companies evolved from traditional family-owned companies. These firms do not embrace openness in the firms' practices and continue to be managed as if they are still owned by their founders (Ow-Yong & Cheah, 2000). A survey conducted by Shamsir Jasani (2002) found that the majority of Malaysian family firms are small-scale; founders manage the firm with the help from children and relatives; and founders do not force the children to join the firms, unless the children themselves are willing to work with families.

Horii (1991) claims that the majority of businesses in Malaysia are owned and operated by the Chinese. Chinese businesses are said to place greater reliance on a dominant CEO in the form of family ownership and tend to place their family members in the top management position of the business. This is supported by Sendut (1991) who claims that the Chinese belong to a cultural tradition of ancestor worship and wealth is normally derived from family business, while their ambitions tend to be dynastic and perpetuate family fortunes.

For instance, the story of the Genting Group is a well-planned succession. The late Tan Sri Lim Goh Tong appointed a successor to ensure his huge business empire will continue. Lim has passed the baton to his second son, Tan Sri Lim Kok Thay, in December 2003. The Genting Group is involved in gaming, power generation, plantations, and oil and gas. Better known as KT Lim, the 55-year-old tycoon seems to have inherited his father's ability to seize and exploit fleeting opportunities based on the group's swift expansion abroad in recent years. Assisting KT Lim in the global push is his nephew, Justin Leong 28 who is the head of strategic investments (2007, October 24).

For Bumiputera companies, some of the notable Malay families in today's market are the Melewar Group founded by Tunku Abdullah Tuanku Abdul Rahman and Sapura Holdings Bhd started by Tan Sri Shamsuddin Abdul Kadir. Both families are now in their second-generation (Ngui, 2002). For a smaller business, Habib Jewel Bhd. is one of the relatively unknown success stories. This company was founded by Habib Mohammad in 1953 in Penang. In 1988, the father (founder) passed the business to the son, Meer Sadik, who has been leading it ever since.

There are also several successful northern Indian textile enterprises operating in Malaysia such as KAJ Chortimall, Globe Silk Store and P Lal Store. These companies are third-generation family. Unlike the Chinese and Bumiputera companies, the Indian companies have remained basically one-store operations, with little expansion or diversification. The Indian entrepreneurs remained conservative and largely cautious of firm expansion due to the highly competitive industry (Gomez, 2001).

In competing and maintaining the family businesses, the MICG CEO, Datuk Shahran Laili Abdul Munid pointed out that family businesses that practised good corporate governance will last longer, have higher valuations and attract more investors. A family business needs to share company vision and must hire professionals to help incorporate the right systems and procedures into the company. In addition, management must be disciplined and communicate with family members as soon as possible, have a clear succession plan and have a shareholding distribution in place (Say, 2009).

2.7 Succession attributes

Besides a well-planned succession, there are other factors that contribute to family-controlled companies' performance such as family or professional CEO, CEO education, age, gender and family generation.

2.7.1 Family CEO or professional CEO

Proponents of internal successions (family CEOs) stress that the family CEOs have greater knowledge of the firm, and their established social networks (Chung, Lubatkin, Rogers & Owers, 1987). Internal candidates provide a smooth transition and stability because they are well acquainted and have anticipated in developing the existing corporate strategy (Carlson, 1961). Internal successions also promote loyalty and reputation, thus, the family CEO has a strong incentive to ensure a firm's profitability (Davis et al., 1997).

Experts claim that family-owned and managed firms achieve higher performance than those that are professionally managed (Monsen et al., 1968; Daily & Dollinger, 1992; Ang, Cole & Lin, 2000). Literature claims that the agency costs are significantly higher when non-executive directors manage the firms (Ang et al., 2000). Family members often hold key positions in family firms. Owner-managed firms achieve 75% higher profit (ROE) than professionally managed firms (Monsen et al., 1968). A study in the US by Anderson and Reeb (2003) evidenced that family firms have higher Tobin's Q and ROA when family members serve as the CEO than when they have outside CEOs.

Villalonga and Amit (2006) conducted a study on the performance of family firms and non-family firms in the US. The findings show that family ownership only creates value when the founder serves as the CEO or as Chairman with a hired CEO. Experts found that family firms perform better than non-family firms when family firms intend to keep the business for future generations. The study found that the family CEO plays an important role in governing family firms, and family members serve as managers (Miller & Breton-Miller, 2006). Based on accounting performance measures, Anderson and Reeb's (2003) results indicate that family firms perform better when the founder is the CEO of the company, but not under the descendant's management. Daily and Dollinger (1992) compare the family-owned firms with professionally managed firms. Their findings reveal that professionally managed firms are larger, older and follow more aggressive strategies. In contrast, family-owned firms are smaller and use less aggressive strategies, but achieve higher performance than professionally managed firms.

Adams et al. (2009) conducted a study in the US for the years 1992 to 1999 on the relationship between founder-CEOs and firm performance. Findings from the study reveal that good and bad past accounting performance increases the likelihood that founder-CEOs will step out. Founder-CEOs value control over their succession more than non-founders and founder-CEOs want to leave their companies "in good shape". Study in Taiwan found that when family CEOs perform poorly, they are more likely to be dismissed than are nonfamily CEOs. Majority of family CEOs are forced to step down due to poor performance. Hence, poorly performing CEOs are more likely to be replaced, suggesting that more stringent monitoring mechanisms exist in family firms in Taiwan (Tsai, Hung, Kuo & Kuo, 2006).

On the other hand, Jayaraman, Khorana & Nelling (2000) examine the CEO founder status on firm performance for a sample of highly paid CEOs in the US. The results reveal that there is no main effect on stock return over a three-year holding period, but that firm size and firm age moderate the CEO founder status-firm performance relationship. A study in India by Johl et al. (2010) show that firms led by family CEOs do not add value to firm performance. However, when the CEO is from the descendant's family rather than from the founder, the firm value is enhanced. This may be because founder CEOs are probably not good managers and or founder CEOs are perhaps managing their income in order to minimise taxes.

In contrast, empirical studies evidence that firms managed by professionals perform better than the founders. Lauterbach and Vaninsky (1999) distinguish between firms

managed by a representative of the owners and firms being led by a professional top manager. Their analyses demonstrate that firms managed by their owners perform worse than those run by a professional manager. Hillier and McColgan (2009) found that stock prices respond strongly and positively, both in the short-term and long-term to the announcement of the departure of a family CEO. They found evidence of a significant improvement in operating returns following family CEO departures.

Two empirical studies of family firms in Britain are undertaken by Hiller & McColgan (2004) and Bloom (2006) are relevant to the succession and management problem within family firms. In most of the family firms, the CEO is occupied by families. Family CEOs are less capable of seizing growth in sales and stability in employment than non-family CEOs. This is because management practices tend to be poor due to a lack of persistent control, dysfunctional business targets, and limited resources and incentives for non-family employees (Bloom, 2006). Therefore, family businesses need to professionalize and delegate authority because of growth, lack of management skills within the family, preparation for succession, or to change the norms and values of the business (Sharma, Chrisman & Chua, 1997).

Non-family employees or professionals play an important role in the family firms (Chrisman, Chua, & Sharma, 1998; Gallo, 1995; Ibrahim, Soufani, & Lam, 2001; Anderson, Duru & Reeb, 2009). Management succession run by a professional manager has a positive impact on the performance (Chittoor & Das, 2007). Professionals possess particular knowledge that is valuable in the mentoring of future-generation leaders or in

filling the leadership role (Lee et al., 2003). In larger firms, non-family executives participate in strategic decision-making (Chua, Chrisman & Sharma, 2003). Thus, attracting qualified non-family employees and fostering value-creating attitudes and behaviours among these employees can be major factors in the success or failure of family firms (Chrisman, Chua & Litz, 2003; Chua et al., 2003). A study in Taiwan by Lin and Hu (2007) shows that family firms require high managerial skills and that using a professional CEO can help firm performance, especially if the family has low cash-flow rights and weak control. However, when there is a great opportunity for expropriation in a family firm, the firm's performance will be better if the CEO is a family member and the family has a high cash-flow right.

Study by Anderson et al. (2009) found that when a professional manager sat in the CEO's chair, results show having professional managers in the CEO role was positively associated with performance in more transparent founder-controlled and heir-controlled firms. Firms transparency was high, having a professional manager as CEO seemed the best way to go in terms of performance regardless whether the firm was founder or heir controlled.

Professional CEOs are generally prescribed as a remedy for firm difficulties (Helmich & Brown, 1972). When drastic changes are required, external managers appear to be more promising because he/she is not bound by old policies and implicit contracts of the firm. External succession can enrich the company with what is needed such as new perspectives, fresh ideas and decisive actions. However, there are studies that claim the

empirical support is weak. Kesner and Sebora (1994) review the studies on the succession rate and successor's choice. Although they found that poor performance increases the frequency of successions, there is no conclusive evidence that poor performance triggers external successions. Kosnik (1987) emphasizes that an external succession is the most effective cure for internal inefficiency because a new manager brought from outside is more likely to conceive and implement fresh initiatives. In the same spirit, Hambrick and Mason (1984) argue that when an organization performs poorly and needs a "change agent", an external succession becomes more likely.

Studies do highlight that the use of professional management activities, styles and characteristics in family firms and the inclusion of non-family members within top management does not significantly increase the professionalism of family firms (Lussier & Sonfield, 2004). Even though professionals are more qualified, family enterprises will only hire professionals after their businesses reach a critical size because they believe that the professional interest may not be aligned with the interest of the family (Bhattacharya & Ravikumar, 2001). Outsiders will not be appointed unless an incremental improvement relative to inside directors is expected, because it is more costly to appoint an outsider (Dalton & Kesner, 1985). Furthermore, the knowledge and skills of professionals are use to help to enhance the family firms value during poor operating performance (Smith & Amoako-Adu, 1999).

2.7.2 CEO education background

Traditionally family CEOs were found to possess fewer college degrees (Brockhaus & Nord, 1979). A total of 42% of companies in Lebanon do not have the required qualifications for family members entering the business (Fahed-Sreih, 2009). It is claimed that the informal training received by children within the family may be a substitute to formal managerial training received through educational institutions (Lentz & Laband, 1990). A survey carried out by Tyee (2007) in the US evidenced that two-thirds of family businesses do not require family members to have the qualifications or related experience necessary to be successful when entering the business, although 25% think the next generation is not competent enough to take the reins.

CEO education is vital in determining the company's journey. If the CEO has an academic qualification in managing the business, there is high chance that the firm performance will be enhanced. Owners need to consider the suitability of the successor, particularly the level of education that the successor possesses in managing the family firms. Family firms need to make a paradigm shift whereby families need to send their children to colleges because it helps the family firms manage systematically and enables them to prepare good succession. In the US, an increasing number of young people are earning college degrees (Ibrahim & Ellis, 1994).

Successors are opting for college instead of several years of experience working with someone else. In the past, family CEOs were found to posses fewer college degrees

(Brockhaus & Nord, 1979). However, today, many youngsters go to college instead of gaining several years of experience in the work place (Goldberg, 1996). The owners of family are encouraged to send their sons and daughters for skills training ahead of other staff. A study reveals that family businesses show a positive relationship between education and innovation (Kimberly & Evanisko, 1981). Indirectly, an educated CEO may help to increase firm value.

2.7.3 CEO age

The family's approach to succession planning is highly related to the founder's age (Lansberg, 1988). Preparations for succession may be a means by which the owner can demonstrate commitment to the organization and its future, while controlling for risk. As the owner gets older, his or her awareness of the need to the ownership and control increases. Therefore, owners need to plan for succession planning (Harveston et al., 1997).

In Malaysia, under the Companies Act 1965, the maximum age for a company director is 70 years old, unless passed by special resolution (voted by a majority of not less than three-fourths of the shareholders at the AGM). In the US, the mandatory retirement ages for directors are between 62 and 65 years old (Ward, 1991). Tyee, (2007) found that almost 60% of major shareholders in family businesses are 55 or older (30% are 65 or older).

Research indicates that older executives tend to have a stronger commitment to the organization (Becker, 1974). A higher age is found to be advantageous in decision-making. Boards with higher age exhibit more conservative and better judgment (Muth & Donaldson, 1998). Study also claims that older decision makers take a longer time to make decisions, seek a greater amount of information and are able to value the information correctly before making a decision (Daboud, Rasheed, Priem & Gray, 1995). Shaw et al. (2009) found that the older age profile of male owners had a positive impact on experience. Studies have found that managerial success is positively correlated with age. An older manager does have a higher chance of managerial success. This is due to the level of experience that the manager possesses (Brockmann & Simmonds, 1997). On the other hand, studies suggest that cognitive abilities, including learning ability, reasoning and memory decreases as people age (Burke & Light, 1981). For older executives, both financial security and career security may become more important and they may try to avoid risky decisions (Vroom & Pahl, 1971). Hence, boards that comprised older board members are more likely to be risk averse and less likely to undergo major strategic changes (Golden & Zajac, 2001).

Conversely, younger managers tend to pursue more risky and innovative growth strategies (Guthrie & Olian, 1991) and seem to handle new and creative ideas better than older managers (Campbell, Trapnell, Heine, Katz, Lavallee, & Lehman, 1996). A young executive is more willing to take risk and to change. Firms are likely to undergo a major change in corporate strategy if they are run by younger managers (Wierseman & Bantel, 1992). Younger managers also tend to bring better cognitive resources for decision-

making tasks (Bantel & Jackson, 1989) and have more energy and stamina to implement new decisions (Campbell et al., 1996). Goldberg, Finkelstein, Perry and Konrad (2004) found that younger men received more promotions in old-typed industries, while younger women received more promotions in young-typed firms. However, a study conducted by Smith and Amoako-Adu (1999) shows that age is negatively related with firm value. The stock market reacts negatively to the appointment of family successors. Stock price is lower when the successor is young in age. This reflects that the public has less confidence with a young successor as he/she is new and lacks management experience.

2.7.4 Gender

Research has found that male-owned businesses outperform female-owned businesses. Loscocco et al. (1991) found that firms owned by men outperformed firms owned by women in terms of sales volumes and income. They suggested that women's lack of industry experience and their concentration on less profitable sectors of the economy contributed significantly to their lower sales and income. They also found that firm's size generated more sales to male-controlled firms than female-controlled firms, and that females were not able to generate as much financial benefit from size as males. These findings were supported in a comparative study conducted by Fischer, Reuber and Dyke (1993), which found that firms owned by men consistently outperformed those of women with respect to number of employees, annual sales, and income. This research also found that men's businesses exhibited a higher level of productivity than those of women in terms of sales per employee. Moreover, they found that women had less relative business

experience than men, which they suggested is indicative of the barriers that women face with respect to access to business experience.

Shim and Eestlick (1998) examined differences and similarities between Hispanic female and male business owners with respect to business characteristics, personal background, and financial performance. They found that Hispanic female business owners had fewer years of business experience, fewer employees, and smaller annual sales than their male counterparts. However, they argued that female-owned businesses were as likely to achieve higher growth stage as their male counterparts. These findings were supported by the findings of Fasci and Valdez (1998) who noted significant differences between male-owned firms and female owned firms with respect to the ratio of profit to gross revenue. They suggested that work experience and age of business contributed significantly to that difference. In their sample, women had less experience and their firms were younger than those of men, which they argued, came as a result of socialization practices, family roles, and lack of networks or contacts.

Shaw et al. (2009) conducted a study on gender and entrepreneurial capital with firm performance. Women business owners undercapitalise their firms, typically investing approximately only one third of the capital used by men. Therefore, the firm performance is lower. An empirical study by Alowaihan (2004) found that even though women are older than their male counterparts and have higher education levels, women-owned firms financial performance was significantly lower than men-owned firms because the women have less business experience.

A study by Kalleberg and Leicht (1991) shows that women's firms were not more likely to fail, nor less successful than those headed by men. No doubt these findings contradicted the long held belief of women's inferiority in entrepreneurship. Moreover, they suggested that processes underlying small business performance headed by men were similar to those headed by women. On the other hand, they found that firms headed by women were smaller and had a lower level of gross earnings than those headed by men. In addition, they found that men had more experience in terms of prior self-employment than women. Nevertheless, Kalleberg and Leicht (1991) argued that these factors had no bearing on the survivability and success of these firms.

These findings were supported recently in a comparative study in Australia that found no significant differences between the financial performance of male-and female-controlled businesses in terms of total income to total assets, the return on assets, and the return on equity, although women-owned businesses were significantly smaller and generated less profit and income. Furthermore, after removal of the control variables, there was evidence to suggest that female-controlled businesses outperformed male-controlled businesses (Watson, 2002). A study by Nielsen and Huse (2010) in Norway also claimed that it is difficult to establish a direct relationship between board gender composition and firm performance. To the extent that boards perform multiple tasks simultaneously and women have a differential impact on some of the tasks, no overall performance differences can be detected between firms with high and low ratios of women directors.

Empirical study evidences that there is a difference in the way male owners and female owners view and run their firms. There is a strong perception that society favours men over women (Prasso, 1996). Male owners tend to be more competitive, have larger networks and want to be the first. Female owners, on the other hand are more nurturing, supportive in the work environment and do not focus on the financial performance as an important element for firm survival, but focus more on the primary objectives of the firm. They tend to avoid risk and to focus more on a long term perspective (Butner & Moore, 1997). In Britain, the appointment of women to top boards is still rare and they remain a distinct minority (Holton, 2000).

In family firms culture, it is presumes that the eldest sons of owners will be the successors (Holliday & Letherby, 1993). There is a tremendous burden of expectation from parents on most first-born children, especially sons, about working in the family firm (Ward & Mendoza, 1996). Alcorn (1982) suggests that family firms are similar to monarchies in which the eldest son becomes the uncontested successor. Study by Kuratko (1993) reveals that for succession purposes, firms prefer son to take over the firm rather than daughter.

Some family firms still see the choice of a daughter as successor is rather undesirable. The reasons are many. With daughters involvement, indirectly sons-in-law will have chance to get in on the act or even take over the business. Furthermore, where there is marriage, there may be divorce. Thus, the founders foresee the problem of family name. A married daughter will change her surname and use husband surname. So, it disrupts the

symbolic and emotional value of people that attach to the company label and identity. Because of the issues, daughters are unwelcome in some family firms (Kets de Vries, 1996). Harveston et al. (1997) argue that what works well for male-led businesses will not necessarily work well for female-led businesses. Certain characteristics like age of the owner are important as a determinant of succession-planning processes among male-led, but not among female-led.

Women are often thought to be disadvantaged relative to men in the business arena. It is commonly believed that female-owned businesses are less successful and fail more often than male-owned businesses (Cuba, Decenzo & Anish, 1983). Recent surveys carried out within the US found that there are more women on corporate boards than 20 years ago (Holton, 2000), however, they still only represent between 5 and 11% of the appointments (Bilimoria & Wheeler, 2000; Burke, 2000). Eagly and Carli (2007) highlighted that women occupy more than 40% of all managerial positions in the US. Based on the most highly paid executives of Fortune 500, only 6% are women. Most notably, only 2% of the CEOs are women, and only 15% of the seats on the board of directors are held by women. Ferrary (2009) carried a study in France. It is evidenced that there is an association between women and the effect on share price. Feminization of management seems to be a protection against financial crisis.

2.7.5 Family generation

Every generation adds valuable experience to the family and the firm (Astrachan et al., 2002). The desire to let subsequent generations inherit the firm makes the family shareholders keener than the other shareholders to ensure the long-term survival of the firm (Anderson et al., 2003). A study by Zahra (2005) found that multiple generations bring fresh insights, experiences and new knowledge into the family firms, thereby promoting innovation. Therefore, family firms need to grab the opportunity to capitalize on the skills and talents of their family members in promoting entrepreneurship and venturing into new markets. In family firms, family members act as stewards to the firm. As stewards, family members often commit deeply to the mission of the firms, treasure its employees and stakeholders and feel motivated to do their best for the family and the organization as a collective (Davis, Schoorman, Mayer & Tan, 2000; Corbetta & Salvato, 2004; Miller & Le Breton-Miller, 2005).

Studies have found that firm performance improves when founding family members are involved in management. Founding families maintain the employment stability during temporary market downturns (Lee, 2006). Another research found that the founder-controlled firms grow faster and invest more in capital assets and research and development. Meanwhile, the descendant-controlled firms generate more profit in because of the experience of the founder (McConaughy & Philips, 1999). In a cross-country study of Continental European firms, Barontini and Caprio (2006) confirm the finding that market valuation and operating performance are higher in founder-controlled

corporations and at least not worse in descendant controlled firms. In terms of the European evidence, Sraer and Thesmar (2007) show that for a sample of French stock market listed companies, family firms outperform widely-held corporations. Their results hold for founder-CEO firms as well as for heir-managed firms. They explain this finding through implicit insurance contracts with the labour force in heir-managed firms: employment is less sensitive to industry shocks and consequently, heirs pay lower wages. However, study by Johl et al. (2010) evidenced that Indian first generation firms are associated with lower performance, thus, suggesting that these firms do not play an important entrepreneurial role, which is said to be unique and value adding.

Studies highlight that the successor is likely to be less able to manage the firms when corporate control is passed from the founder to the next generation (Morck & Yeung, 2003). When investigating family firm performance more closely, a so-called "founder effect" can be identified. Founders seem to have a special influence and put forth unique value-adding skills that lead to better performance. A study by Rodsutti and Makayathorn (2005) indicated a strong influence of the founder in the first family generation. However, when a later generation took up the leadership, the power of the leader decreases because the respect for the leader is still towards the founder. In Canada, when family successors are appointed, stock prices decline by 3.2% (Smith & Amoako-Adu, 1999). Another study in the US evidenced that firm value was destroyed when descendants serve as CEOs (Villalonga & Amit, 2006). Experts also claim that the second and third generation families do have significantly fewer family members on the board than first generation family firms (Davis & Harveston, 1998).

2.8 Conclusion

This chapter incorporates a review of the literature pertaining to corporate governance mechanisms, ownership structure and succession planning affecting firm performance. After reviewing the relevant literature to this study, hypotheses are developed in the following chapter which revolves around factors that affect corporate governance (board and ownership structure), succession planning and firm performance.

CHAPTER THREE

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

3.1 Overview of the chapter

This chapter discusses the theoretical framework and hypotheses development based on the related theories and empirical evidence from previous literatures. Three equations are proposed in this study. Equation 1 examines the effect of corporate governance mechanisms (board and ownership structure) with firm performance using the total sample (family and non-family controlled companies). Equation 2 investigates the effect of corporate governance mechanisms and succession attributes towards firm performance using the family-controlled companies' sample. Lastly, Equation 3 focuses on the effect of corporate governance mechanisms on performance by using the non-family companies' sample. Twelve (12) hypotheses were developed for this study, with one attribute being examined under one hypothesis. This chapter is organised in seven sections. Section 3.2 presents and integrates the theoretical framework of the study. Section 3.3 discusses the theoretical perspective and empirical support for hypothesis H_1, testing the relationship between family and non-family controlled companies with firm performance, is the first attribute examined in this study. Section 3.4 explains hypotheses H_2, H_3, H_4, H_5 and H_6 focuses on board size, board independence, director's education background, director's professional qualification and leadership structure, which are grouped under board attributes. Section 3.5 discusses hypotheses H_7, H_{7a} and H_{7b}, which

are related to managerial ownership, family ownership and non-family managerial ownership which is group under ownership structures. Next, Section 3.6 focuses on succession attributes and the related hypotheses H_8, H_9, H_{10}, H_{11} and H_{12} are related to family or professional CEO, CEO education, CEO age, gender and family generation. Finally, Section 3.7 presents the conclusion of the chapter.

3.2 Theoretical framework

This theoretical framework covers the corporate governance mechanisms (board and ownership structure) and succession attributes in relation to firm performance as suggested in this study.

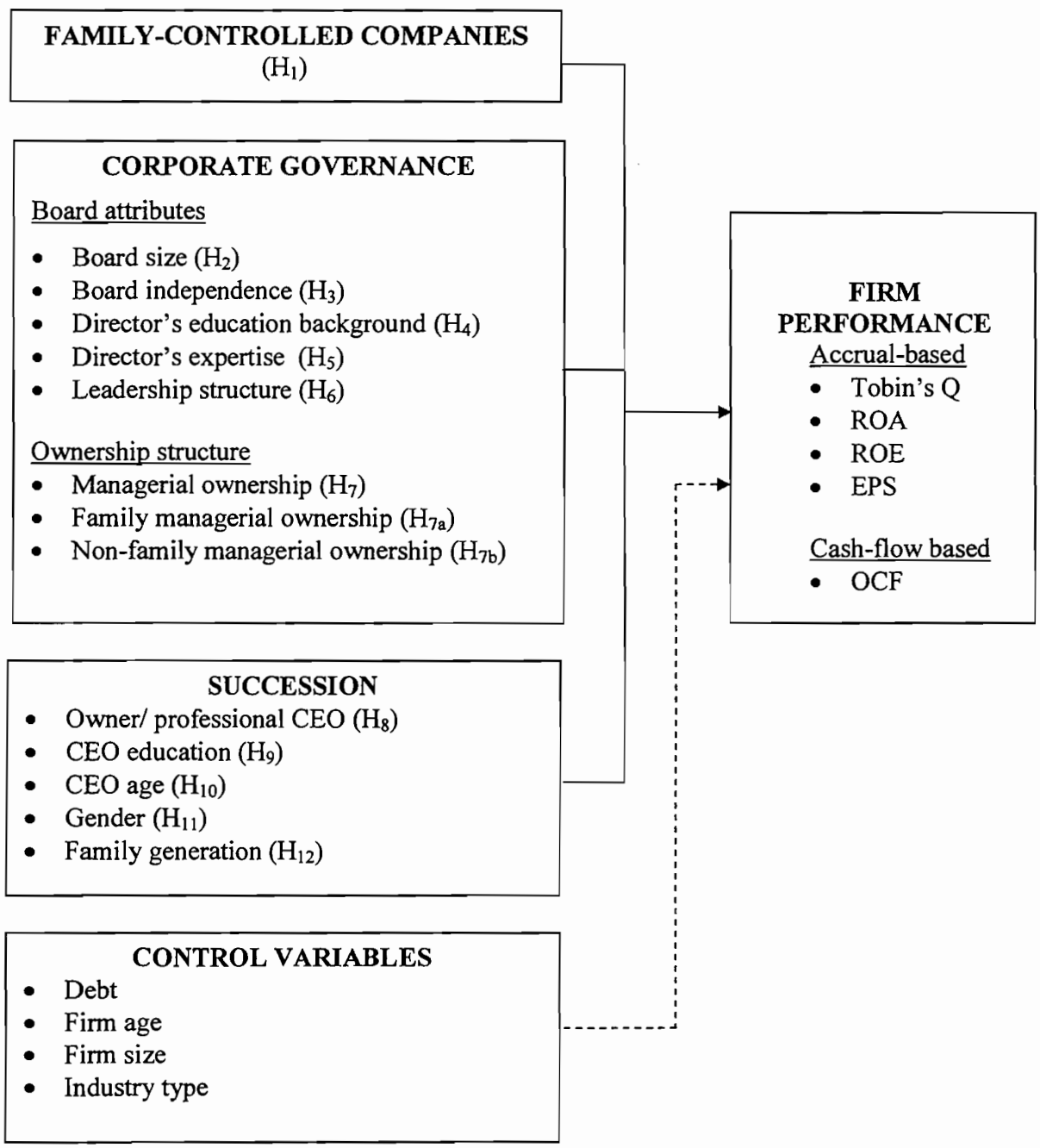
3.2.1 Proposed theoretical framework

Past studies have looked at the relationship between board attributes and ownership structure with performance in general. However, little attention has been given to the relationship of corporate governance mechanisms and succession planning, specifically for family and non-family controlled companies, which may enhance firm performance. This research model is developed from the central research question: *"How would the corporate governance mechanisms (board and ownership structure) and succession planning in family and non-family businesses affect company performance among PLCs in Malaysia"*. This study proposes a theoretical framework based on past literature on the

relationship between corporate governance mechanisms and succession planning with firm performance (as discussed in Chapter 2).

The model to be examined is presented in Table 3.1. The model presents a hypothesised linkage between family-controlled firm, corporate governance mechanisms and succession with firm performance. The straight line shows the direct effect of the attributes. The dotted line represents the effects of control variables on the firm performance. Overall, the figure shows an integrated model relating to board attributes, ownership structure and succession attributes with firm performance.

Figure 3.1: Conceptual framework for family-controlled companies, corporate governance mechanisms and succession attributes with firm performance.



There are various theories that support this study, agency theory, stewardship theory and corporate governance views. These theories actually complement each other. In the past, empirical researchers have attempted to validate either agency theory or stewardship theory as "one of the best ways" to corporate governance, assuming that all managers are either stewards or agents. The studies have resulted in mixed findings, thus, there is a need for both agency theory and stewardship theory explanations of management (Donaldson & Davis, 1994).

Agency theory originated during the 1960s and early 1970s, where economists explored risk sharing among individuals or groups (Wilson, 1968). A study by Wilson (1968) described the risk-sharing problem as one that arises when cooperating parties have different attitudes towards risk. The agency theory is derived from the introduction of the modern corporation by Berle and Means (1932), which claimed that there is a separation between ownership and the control of wealth. Although owners prefer to manage their own firms and obtain the maximum utility for themselves, it is impossible because of the capital requirements of the modern corporation (Berle & Means, 1932). Corporations grow and a single owner is incapable of meeting the increased economic obligations of the firm. As a result, modern corporations normally have multiple owners, with the intention of maximizing their investment in the project. According to Jensen and Meckling (1976), agency theory is explained by the principal-agent relationship, where "a contract under which one or more persons (the principal (s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent" (p.308). Agency theory usually assumes that

these principal-agent relationships will be characterized by a conflict between the interests of the principal and those of the agent, and the agent will be motivated to pursue his/ her own goals (Sundaramurthy & Lewis, 2003). Therefore, when the agent's behaviour is not controlled or restrained, the goals of the principal are unlikely to be attained.

In contrast, stewardship theory was developed based on the perspectives of psychology and sociology. Stewardship theory views that managers behave as stewards and gain higher utility from pro-organizational, collectivistic behaviour than from individualistic and self-serving behaviour as presumed by agency theory (Jaskiewicz & Klein, 2006). Managers are not opportunistic and self-serving as suggested by agency theory, but are motivated to act in the interests of their organisations and to maximise shareholders' wealth by improving organisational performance (Davis et al., 1997).

Executive directors are seen as highly valuable to boards because they provide specialised knowledge and expertise about their organisations and are better in evaluating the CEO due to their familiarity with the quality of his/her decisions (Baysinger & Hoskinson, 1990; Wagner, Stimpert & Fubara, 1998). Researchers in this area have suggested theoretical limits of agency theory (Hirsch, Michaels, & Friedman, 1987). In particular, assumptions made in agency theory about individualistic utility motivations resulting in principal-agent interest divergence may not hold for all managers in stewardship theory. Therefore, exclusive reliance upon agency theory is undesirable because the complexities of organizational life are ignored. Additional theory is needed

to explain relationships based upon other, non-economic assumptions (Doucouliagos, 1994).

Therefore, for this study, agency, stewardship and corporate governance theories are fundamental and complement each other in answering the research questions. It is expected that the independent variables (family-controlled firms, board, ownership structures and succession) influence firm performance. It is claimed that when ownership is high and concentrated, the higher benefits and costs are borne by the same owner (Demsetz & Lehn, 1985). Further, family companies usually invest most of their private wealth in the company, which is not well-diversified. Therefore, families are more concerned with the firm's survival because the risks are not fully diversified, and they have a strong incentive to monitor management closely. Monitoring cost tends to be lower in companies controlled by family than by non-family (Fleming et al., 2005; Fama & Jensen, 1983). The controlling shareholders will serve the interests of minority shareholders as well as their own interests (Schulze et al., 2001). This will shun the exploitative behaviours of agents towards the principals (Jensen & Meckling, 1976). In addition, it will reduce the agency costs and enhance the firm performance. Furthermore, as a steward, family owner-managers will not be self-serving for their own economic gain, but for the organization and stakeholders. Thus, stewards will protect and maximizes shareholders' wealth through firm performance (Donaldson & Davis, 1994). Table 3.1 summarizes the comparison between agency theory and stewardship theory.

Table 3.1

Comparison of Agency Theory and Stewardship Theory

	Agency Theory	Stewardship Theory
Model of man	Economic man	Self-actualising man
Behaviour	Self-serving	Collective serving
Psychological Mechanisms		
Motivation	Lower order/economics needs (psychological security, economic) Extrinsic	Higher order needs (growth, achievement, self-actualisation) Intrinsic
Social Comparison	Other managers	Principal
Identification	Low value commitment	High value commitment
Power	Institutional (legitimate, coercive, reward)	Personal (expert, referent)
Situational Mechanisms		
Management Philosophy	Control oriented	Involvement oriented
Risk orientation	Control mechanisms	Trust
Time frame	Short term	Long term
Objective	Cost control	Performance enhancement
Cultural differences	Individualism High power distance	Collectivism Low power distance

(Source: Davis, Schoorman and Donaldson, 1997, p.37).

3.3 Family and non-family companies' performance

Many studies carried out overseas discuss the family and non-family companies performance, and the findings are found to be mixed. Studies in the US have found that family firms perform better than non-family firms (Daily & Dollinger, 1992; McConaughy et al., 1998; Anderson & Reeb, 2003; Miller & Breton-Miller, 2006; Villalonga & Amit, 2006). A study by Maury (2006) in Europe and Martinez et al. (2007)

in Chile also supported other studies that family firms perform better than non-family firms. However, Morck et al. (1998), Lauterbach & Vanisky (1999), Perez-Gonzalez (2006) and Nowland (2008) claim that family companies are not as good as non-family companies.

Based on the agency theory perspective, family firms have several incentives to reduce agency costs (Fama & Jensen, 1983; Demsetz & Lehn, 1985; Anderson & Reeb, 2003). As family firms have concentrated shareholdings, they have an increased incentive to reduce agency costs because when higher concentrated ownership is borne by the owners, the greater the benefits and costs (Demsetz & Lehn, 1985). The concentrated owners have substantial economic incentives to diminish agency conflicts and maximize firm value. Specifically, in family firms, the family's wealth is closely linked to the firm's welfare. Families have a strong incentive to monitor the managers' action and minimize the free-rider problem inherent with small, atomistic shareholders. However, it is difficult for family firms to avoid the misalignment between principal and agents. The agency cost in family firms can take place between minority owners and major family owners who serve as their potentially exploitative de facto agents (Morck & Yeung, 2003; Villalonga & Amit, 2006).

On the other hand, stewardship theory views owners as the stewards who are motivated to act in the best interests of their principals (Donaldson & Davis, 1991). The stewards behaviour comprises of pro-organizational, collectivistic and is self-serving. The managers are essentially trustworthy individuals and they are stewards of the resources

entrusted to them. Since executive directors spend their working lives in the firm they govern, they understand the firms better than outside directors and, therefore can make superior decisions (Donaldson & Davis, 1991, 1994). This behaviour will benefit the objectives of the principals, such as shareholders (through positive effects of profits on dividends and share prices), and stewards'.

Stewardship theorists claim that there is a strong relationship between the success of the organization and the principal's satisfaction (Donaldson & Davis, 1991; Fox & Hamilton, 1994; Davis et al., 1997). It has been proposed that the keen involvement encouraged by the stewardship philosophy creates a sense of psychological ownership that motivates the family to behave in the best interest of the firm. The superior corporate performance is linked to the majority of inside directors as they naturally work to for the shareholders. Furthermore, stewardship philosophy has been practised and is common among successful family firms (Corbetta & Salvato, 2004).

Hence, based on the arguments by the agency and stewardship theories, this study expects that family-controlled companies will have higher firm performance than non-family controlled companies. The high concentrated ownership borne by the owners increases the incentives for the owners to reduce the agency costs. Further, characteristics of the stewards such as trustworthy, pro-organizational, collectivistic and self-serving behaviour are an added value for family-controlled firms to perform better than their counterparts. The owners or stewards mostly spend their working lives building up the companies, and, therefore, they understand the companies better than outside directors.

Hence, superior decisions can be made and it has an impact on enhancing company value. Thus, it is hypothesised that:

H_1: Ceteris paribus, family-controlled companies have higher company performance than non-family controlled companies.

3.4 Corporate governance mechanisms attribute

The board of directors play an important role in enhancing the performance of family and non-family controlled companies. This is because an effective board will be able to enhance the firm performance. Under board attributes, this study examines board size, board independence, director's education background, director's with professional qualification, leadership structure and ownership structure as the hypotheses variables.

3.4.1 Board size

Based on the corporate governance perspective, every board should examine its size, with a view to determining the impact of the number upon its effectiveness[6]. The board should include a balance of executive directors and non-executive directors (including independent non-executives) such that no individual or small group of individuals can dominate the board's decision making[7].

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[6] Malaysian Code on Corporate Governance (2001, Part 2, AA XII).
[7] Malaysian Code on Corporate Governance (2001, Part 4, A II).

Agency theory claims that the role of non-executive directors as monitors of management's performance and actions (Fama & Jensen, 1983) is independent and not intimidated by the CEO (Weisbach, 1988) and acts as a positive influence over directors' deliberations and decisions (Pearce & Zahra, 1992).

The resource dependence theory also supports that non-executive directors provide firms with links to the external environment due to their expertise, prestige and contacts. Spencer (1983) suggest that non-executive directors often see themselves in an advisory rather than a decision making role, they will be influential and listened to, although it may not be their function to actually institute policy (Haniffa & Hudaib, 2006).

In ensuring board effectiveness, the board should be not too large or too small. Experts recommend that board size should be around seven or eight executives on the board to ensure its effectiveness (Jensen, 1993; Yermack, 1996; Abdullah, 2001; MSWG-NUBS, 2007; Zainal Abidin et al., 2009). Yermack (1996) also claims that businesses with small board size have higher stock market value than companies with large board size. The results confirmed the findings by Jensen (1993) who claims that small board size could increase firm performance. Additionally, Lipton and Lorsch (1992) found that too many executives on the board could create more problems for the companies. Borokhovich et al. (2006) argue that a small board is more effective than a larger one in making executive replacement decisions. Smaller board size is more effective to limit directors' incentives to shirk, as it is easier to monitor each member and decisions can be made quickly (Haniffa & Hudaib, 2006). On the other hand, Haleblian and Finkelstein (1993)

argued that large groups have more advantages in term of problem solving capabilities by increasing the amount of information that can be absorbed and recalled and increasing the numbers of potential solution strategies and critical judgement to correct the errors. Haniffa and Cooke (2005) argue that bigger boards may be constructive for some companies as they provide diversity to help companies to secure critical resources.

For family companies, board size does influence firm performance. Some studies claim that family companies do have large boards, but others claim that family companies have small boards. Family firms have slightly smaller boards than non-family firms (Chen et al., 2008). Mishra et al. (2001) evidenced that large boards are not as effective as small boards. Founding family companies with small board size show a higher Q value. A study by Mak and Yuanto (2002) also supports that small board size enhances firm value in the case of Singaporean and Malaysian companies. Specifically, a study in Malaysia shows that there is a strong relationship between firms with smaller boards and firm value for both family and non-family ownership (Abdul Samad et al., 2008). Another study by Amran and Che-Ahmad (2009) found that non-family controlled businesses with smaller board size perform better.

In contrast, a study by Chen and Nowland (2010) evidenced that family-owned companies in Asia countries have a larger board size and that boards are dominated by family members or close friends, and there are few truly independent directors (Meng 2009). This finding is consistent with previous studies (Anderson & Reeb, 2003; Chen et

al., 2008). However, Bhagat and Black (2002) claim that there is no relationship between firm performance and board size.

Based on the corporate governance view and agency theory discussed above, board size may be either positively or negatively associated with firm performance. Both directions are built based on the empirical research and it has been well argued in the literatures. When the board is very large, the disadvantages such as lack of cohesiveness, coordination difficulties and fractionalization are most severe, becoming less prevalent as the board size decreases. A very small board cannot take advantage of the pool of expertise, counsel and advice of a larger board, however, these benefits emerge when the board becomes larger. Hence, based on the above literatures, this study hypothesises that:

H_2: Ceteris paribus, there is a relationship between board size and company performance.

For family companies, this study expects that non-executive directors are appointed onto the family board in order to meet the Code (2001) requirements. However, the majority of the board members are children and relatives of the family companies that act as the executive or non-executive directors. The board size for family-controlled companies is expected to be bigger because of the inclusion of other influential people such as royal families, political individuals, retired police officers, retired armed forces, besides the family members.

The corporate governance and resource-based theory argued that large boards are particularly effective because they provide counsel and advice regarding the strategic options of the firm (Pearce & Zahra, 1991) and effective in their oversight duties relative to smaller boards (Sulong & Mat Nor, 2009). Large boards are often believed to be more capable of monitoring the actions of top management, because it is more difficult for CEOs to dominate larger boards (Zahra & Pearce, 1989). Zainal Abidin et al. (2009) also evidenced that larger board size contributes more towards firm performance as a whole. Larger board means that there are more ideas and skills that can be shared among board members.

A large board also increases the range of perspectives brought to solve on problems (Haleblian & Finkelstein, 1993). The board's capacity for monitoring increases as more directors are added. The benefit may be outweighed by the incremental cost of poorer communication and decision-making associated with larger groups. Such a viewpoint has been advanced by Lipton and Lorsch (1992) and endorsed by Jensen (1993). Haniffa and Cooke (2005) argue that bigger boards may be constructive for some companies as they provide diversity that helps companies secure critical resources and reduce environmental uncertainties. Larger boards may provide an increased pool of expertise and better networking (Goodstein et al., 1994). This argument is also true in family businesses. Therefore, based on the above literatures, this study hypothesises that:

H_{2a}: Ceteris paribus, there is a positive relationship between board size and company performance, for family-controlled companies.

For the non-family controlled companies, based on resource-based theory and corporate governance literatures on board size, this study predicts that non-family controlled companies to have larger board size. This is because larger board size provides greater information, so better solution strategies and critical judgements can be achieved (Pearce & Zahra, 1991; Goodstein et al., 1994; Haniffa & Cooke, 2005; Zainal Abidin et al., 2009) Further, higher number of directors may benefits the company as these directors have expertise, experiences, prestige and greater networking with the environment (Haleblian & Finkelstein, 1993; Sulong & Mat Nor, 2009). Thus, all these factors may enhance firm value. Therefore, this study hypothesises that:

H_{2b}: Ceteris paribus, there is a positive relationship between board size and company performance, for non-family controlled companies.

3.4.2 Board independence

According to the corporate governance perspective, the board of directors must be balanced and at least one third of the board members must be Independent Non-Executive Directors. The composition of the board must have at least two directors or one third of the Board must be independent[8]. The revised Code states that Independent Non-Executive Directors should be more meaningful and perform an independent oversight function. Furthermore, in appointing the independent directors on the board, the candidates' ability to discharge such responsibilities/ functions as expected from

[8] Malaysian Code on Corporate Governance (2001, Part 2, AA III).

independent non-executive directors[9]. Survey by MSWG-NUBS (2007) showed that majority (94.5%) of the PLCs comply with the requirements made by the Code and Listing Requirements 15.02 that independent non-executive directors make up at least one-third of the membership of the board. Abdullah (2001) evidenced that Malaysian boards are generally dominated by non-executive directors.

Studies in Malaysia found that a higher proportion of independent non-executive directors on the board enhance firm performance, because these independent directors possess a diverse background, attributes, characteristics and expertise, which may improve board processes and decision making (Zainal Abidin et al., 2009). Firm-boards with a high representation of outside and foreign directors are associated with better performance compared to those firm-boards that have a majority of insider executive and affiliated non-executive directors (Ameer, Ramli & Zakaria, 2010).

Agency theory suggests that the separation of corporate ownership and control potentially leads to self-interested actions by managers (Jensen & Meckling, 1976). To combat agency problems, because of their presumed independence relative to executive directors, non-executive directors are able to do a better job in monitoring and controlling the management, thus helping to improve company performance (Walsh & Seward, 1990). Meanwhile, resource dependence theory views board directors as boundary spanners who extract resources from the environment (Pfeffer, 1973). Carpenter and Westphal (2001)

[9] Revised Malaysian Code on Corporate Governance (2007, Part 2, AA VIII).

report that non-executive directors with network ties to strategically related firms contribute to the strategic decision-making process. Chouchene (2010) found that in French, when part of capital represented on the board and held by the coalition of control is low, the presence of independent directors is more important.

Firm performance is claimed to be enhanced when more independent directors sit on the board. The greater the proportion of non-executive directors, the better the stock market response to a firm's tender offer for other firms (Byrd & Hickman, 1992). Rosenstein and Wyatt (1990) evidence that stock prices increase when a company appoints an additional non-executive directors. Firms that substantially increased the proportion of independent directors do have above-average stock price returns. A study by Bonn (2004) found that the non-executive directors' ratio was positively related to firm performance.

Based on the above discussion, the corporate governance claims that boards should consist of independent non-executive directors. Moreover, independent non-executive directors have larger networking, which indirectly provides an advantage to the company. These are the claims of the resource dependency theory. Therefore, based on the arguments in the literatures, it can be hypothesized that:

H_3: Ceteris paribus, there is a relationship between the percentage of independent non-executive directors and company performance.

Empirical studies (Ward & Handy, 1988; Ward, 1991; Felton & Watson, 2002; Newell & Wilson, 2002; Aronoff & Ward, 2002; Hillman & Dalziel, 2003) evidence that some

family companies prefer to have independent non-executive directors on the board. The independent directors are more independent (Ward & Handy, 1988), provide unbiased views (Kosnik, 1987; Singh & Harianto, 1989), and bring a fresh, creative perspective, openness and functional counterpoint in decision-making by bringing a new dimension of experience that may not be found among family directors (Hsu, 2010).

Despite the advantages of having independent non-executive directors, in family-controlled firms, controlling family members may appoint directors to the board, and, thus, the independence of directors may be compromised by their familiarity with family members (Chen & Jaggi, 2000; Leblanc & Gillies, 2005). The independent directors that stayed in a particular company for a very long time tend to develop a "buddy" relationship with management, and thus find it is difficult to retain their independent judgement of the company affairs (Meng, 2009).

Despite the fact that non-executive directors can bring a new dimension of experience and objectivity that may not be found among family directors and managers, family firms do not generally employ non-executive directors (Young et al., 2008). Family companies appoint fewer independent directors to be on the board compared to non-family companies (Cromie et al., 1995; Abdul Samad et al., 2008). Stewardship theory views that family members (who are the executives and stewards of the firms) are seen to provide rich firm-specific knowledge and a stronger commitment to the firm than the independent directors. Since executive directors spend most of their working lives in the company they govern, they understand the companies better than outside directors and so

can make superior decisions (Donaldson & Davis, 1991, 1994). Owners are also afraid of losing control, afraid of opening up for new, external ideas and viewpoints and disbelieve that the non-executive directors understand the firm's competitive situation (Ward, 1991; Cromie et al., 1995). Non-executive directors are said to create stifling strategic actions (Goodstein et al., 1994), excessive monitoring (Baysinger & Butler, 1985), lack business knowledge to be effective and lack real independence (Demb & Neubauer, 1992).

Based on the above discussion, this study found there is mixed findings on independent non-executives directors on the board. The composition and role of the independent non-executive directors are vital in enhancing the corporate governance in company, and it is also required by the Code (2001) for all listed companies to include independent non-executive directors to be in the board. On the other hand, family companies view that executive directors are more useful, knowledgeable, have stronger commitment and better understand the family company nature. Therefore, it can be hypothesized that:

H_{3a}: Ceteris paribus, there is a relationship between the percentage of independent non-executive directors and firm performance, for family-controlled companies.

For non-family-controlled companies, this study expects that the numbers of independent non-executive directors are predicted to be higher than family-controlled companies. This is because, in non-family controlled companies, the objectives of the company are to maximise the shareholders wealth. The board that consists of independent directors can contribute their independent opinions to the company (Felton & Watson, 2002;

Chouchene, 2010). These directors can do the monitoring and controlling, and, ideal decision-making can be made. Firms that substantially increased the proportion of independent directors had above-average stock price returns (Denis et al., 1997). The greater the proportion of non-executive directors, the better the stock market's reaction to their firm's tender offers for other firms (Byrd & Hickman, 1992).

Further, corporate governance views that non-executive directors are calibre, credible and have necessary skill and experience to bring an independent judgement to bear on issues of strategy, performance and resources including key appointments and standards of conduct. To be effective, independent non-executive directors need to make up at least one third of the membership of the board (The Code, 2002).

Local studies found that a higher proportion of independent non-executive directors on the board have a positive impact on firm performance. This is because independent directors possess a diverse background, attributes, characteristics and expertise, which may improve board processes and decision making, and consequently firm performance (Zainal Abidin et al., 2009). Empirical study also reveals that firm-boards with a high representation of outside and foreign directors are associated with better performance compared to those firm-boards that have a majority of insider executive and affiliated non-executive directors (Ameer et al., 2010). Therefore, based on the arguments presented in this section, it can be hypothesized that:

H_{3b}: Ceteris paribus, there is a positive relationship between the percentage of independent non-executive directors and firm performance, for non-family controlled companies.

3.4.3 Director's education background

Education is an investment in knowledge that increases firm productivity (Schultz, 1971). Economies with well educated employees exhibited faster progress and more rapid increases in efficiency and productivity than those with lower level of education (Becker, 1962). Study by Romer (1994) claims that education and professional training strengthens endogeneously the growth rate by increasing labour quality and productivity. Further, Schultz (1993) pointed out that the evolution of knowledge contributed decisively in the growth rates of organizations. Employees that possess particular capabilities tend to behave more professionally in their daily tasks (Agiomirgianakis et al., 2002; Psacharopoulos & Patrinos, 2004).

Directors with a higher education level are better at handling problems and situations that may arise in the firms. These directors know how to overcome conflicts over money, management control and strategic vision. Thus, firm value is enhanced (Sebora & Wakefield, 1998). Special technical knowledge regarding a firm's operations may give directors greater advantage in monitoring the firm more effectively.

Chen et al., (2005) and Switzer and Huang (2007) showed that intellectual capital

contributes significantly to firm profitability. Further, directors' educational backgrounds enable to supplement management in strategy evaluation (Ruigrok et al, 2006). Therefore, based on literatures discussed above, education is valuable and knowledge is greatly needed, especially in managing the companies. Directors need to make sure that they possess an academic qualification that will help them to manage the companies better. Note that, to my knowledge, there is no study that examines the relationship of director education and firm performance in Malaysia. Hence, it is hypothesised that:

H_4: Ceteris paribus, there is a positive relationship between the percentage of directors' education and company performance.

Educational background and skills may influence family firms' performance. Additionally, a family's special technical knowledge concerning a firm's operations may put it in a better position to monitor the firm more effectively. Family members have an incentive to counteract the free rider problem that prevents atomised shareholders from bearing the costs of monitoring and ultimately reduces the agency costs (Castillo & Wakefield, 2006). This study expects that the education of family directors influences firm performance. Even though family companies may not really be concerned on this matter, they do need to put weight on education, as it is part of succession preparation. Without a knowledgeable and high calibre directors and successors in helping the family companies, businesses can become bankrupt. Hence, it is hypothesised that:

H_{4a}: Ceteris paribus, there is a positive relationship between the percentage of directors' education and company performance, for family-controlled companies.

Directors' educational backgrounds enable to supplement management in strategy evaluation (Ruigrok et al., 2006). Directors' expertise such as in accounting, financing, consulting and law supports managers in making decisions. Therefore, directors' expertise can have a certain effect of firm value (Hillman et al., 2000). Erikson et al. (2005) found that bank directors with financial and accounting knowledge monitor managers more effectively.

Educated employees exhibited faster progress and more rapid increases in efficiency and productivity than those with lower level of education (Becker, 1962). Study by Romer (1994) claims that education and professional training strengthens endogeneously the growth rate by increasing labour quality and productivity. Further, Schultz (1993) pointed out that the evolution of knowledge contributed decisively in the growth rates of organizations. Therefore, from the literatures discussed above, education is an important factor that influences firm value. Without knowledgeable human resources, firms cannot survive in the markets. Hence, it is hypothesised that:

H_{4b}: Ceteris paribus, there is a positive relationship between the percentage of directors' education and company performance, for non-family controlled companies.

3.4.4 Director's expertise

Based on the organisational theory, experienced non-executive directors are more likely to contribute to board effectiveness (Westphal & Milton, 2000). Experts that are outsiders

are more effective in monitoring the board and firm performance (Useem, 1993). Directors who sit on several corporate boards have developed reputational capital as experts (Fama & Jensen, 1983). Boards that have directors with CPA, CFA or similar qualifications generate less earnings restatements (Agrawal & Chadha, 2005). In addition, stock markets show a positive reaction to the appointment of directors with accounting knowledge (Defond et al., 2005). The Revised Code of Corporate Governance (2007) also suggests that the board should consider the candidates' (directors) skills; knowledge; expertise and experience; professionalism; and integrity in carrying out their duties[10]. This information should be disclosed in the annual report[11].

In line with the resource based theory, professionals or experts are seen to be importance in enhancing the firm performance. Directors who are derived from a professional or business relationship may be highly effective at the resource dependence and counselling/expertise board roles due to their industry contacts, business acumen, specialized knowledge and skills. They are appointed as board members so that the firm can tap into the resources that they bring (Dalton et al., 1998). Similarly, Anderson and Reeb (2004) posit that directors that have skills in knowledge-based fields such as law, finance, accounting and consulting, are sought after due to their value-adding advice and counsel.

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[10] Revised Malaysian Code on Corporate Governance (2007, Part 2, AA VII).
[11] Malaysian Code on Corporate Governance (2001, Part 2, AA IX).

Many boards in the US have appointed directors with experience in other firms and industries (Westphal & Milton, 2000). TIAA-CREF and other pension funds in the US have required that companies create boards "composed of qualified individuals who reflect diversity of experience" (Forbes, 1995).

Based on the the literatures, directors' expertise is actually important in helping the companies' success. Companies need expertise to help manage the businesses. Experts have knowledge, experience and are able to give advice before companies embark on any projects. Thus, based on the discussion above, it is hypothesised that:

H_5: Ceteris paribus, there is a positive relationship between the percentage of experts and company performance.

Companies should look for superior quality directors to monitor management (Fairchild & Li, 2005). In family companies, the independent directors' background and competency may contribute positively to the family firms' performance (Johannisson & Huse, 2000). However, sometimes it is difficult to attract professionals to sit on family companies. Actually there is no shortage of qualified directors, however, stringent laws and rules pertaining to directorship and litigation by shareholders make directors more careful in accepting their job (Raber, 2005). Companies can no longer be satisfied with directors who simply put in a token appearance. Companies seek qualified directors, together with their expertise (Berube, 2005). Thus, based on the discussion above, it is hypothesised that:

H_{5a}: Ceteris paribus, there is a positive relationship between the percentage of experts and company performance, for family-controlled companies.

In today competitive business environment, a professional needs to be competene and master the knowledge and aplly it to specific business settings (Brockbank et al, 1999). Lawler and Mohrman (2003) argued that professionals need to become more effective strategic business partners. By having these characters, thus indirectly these professionals could positively influence the value of the company. Directors' expertise such as in accounting, financing, consulting, and law supports managers in making decisions. Therefore, directors' expertise can have a certain effect on firm value (Hillman et al., 2000). Moreover, for non-family companies, the objectives of the business are to maximize the shareholders wealth. Therefore, these professional directors may help companies in advising and giving better ideas to companies. Thus, based on the discussions in the literatures, it is hypothesised that:

H_{5b}: Ceteris paribus, there is a positive relationship between the percentage of experts and company performance, for non-family-controlled companies.

3.4.5 Leadership structure

The agency theory claims that there must be a separation between ownership and control. Separate leadership is found to be associated with higher performance than dual leadership (Berg & Smith, 1978; Daily & Dalton, 1994). Separate leadership structure could curb agency problems, and enhance firm value (Fama & Jensen, 1983; Fosberg &

Nelson, 1999). Corporate governance also suggests that there should be a clearly accepted division of responsibilities at the head of the company, which will ensure a balance of power and authority, such that no one individual has unfettered powers of decision. A survey conducted by MSWG-NUBS (2007) shows that 82% of companies had a clear separation of responsibility between Chairman and the CEO.

On the other side, literatures argue that dual leadership enhances higher company performance (Rechner & Dalton, 1991; Boyd, 1994). This is because separate leadership dilutes the top management power and increase the conflict between the board of directors and management (Anderson & Anthony, 1986; Alexander et al., 1993). The company management also is more efficient with dual leadership because of less bureaucracy and less information asymmetry (Haniffa & Cooke, 2002). The Code (2001) states that companies that have combine roles of Chairman and CEO, there should be a strong independent element on the board. A decision to combine the roles of chairman and chief executive officer should be publicly explained[12]. A study in Malaysia found that the role of duality could enhance the firm value (Chang & Shazali, 2005), and duality held by few powerful corporate players help push the firm performance (Sulong & Mat Nor, 2009). Therefore, based on the debated arguments by previous researchers, this study predicts that:

H_6: Ceteris paribus, there is a relationship between companies that practice separate leadership and company performance.

[12] Malaysian Code on Corporate Governance (2001, Part 2, AA II).

However, for family-controlled companies, the stewardship theory supports the arguments that family companies favour practising duality leadership compared to separate leadership (Chen et al., 2005). The arguments are that the CEOs are the stewards of the companies, and their pro-organizational actions are best facilitated when the corporate governance structures give them high authority and discretion. This is attained when the CEO is also the Chairman of the board (Donaldson & Davis, 1991; Felton & Watson, 2002). A duality structure is viewed as dysfunctional under the agency theory.

However, under the stewardship theory, when duality leadership is practised, the stewards can maximize their utility as they achieve organizational rather than self-serving objectives. The CEO-Chairman is clearly responsible for the fate of the firm and he/she has the power to determine company strategy without fear from outsiders (Finkelstein & D'Aveni, 1994; Davis et al., 1997). Further, the founder-CEOs were more concerned about company survival and they protect their legacy for future generations (Chen et al., 2005). Based on the arguments above, the stewardship theory claims that duality leadership is more appropriate for family-controlled company scenario. Therefore, it is hypothesised that:

H_{6a}: Ceteris paribus, there is a negative relationship between family-controlled companies that practice separate leadership and company performance.

For the non-family controlled companies, as shareholdings are held by many investors at large, so the best leadership structure to enhance corporate governance is the separate leadership. In separate leadership, the power of the CEO and Chairman is split, where

Chairman conducts meeting, controlling for discussion and allow discussion of important matters. The CEO handles the to-day management. Thus, works are more focussed, less bias in decision-making and greater transparency can be achieved. Thus, this study hypothesised that:

H_{6b}: Ceteris paribus, there is a positive relationship between non-family controlled companies that practice separate leadership and company performance.

3.5 Ownership structure

The ownership structure determines the distribution of power between managers and shareholders. The concentration of ownership would be beneficial to companies as large shareholdings allow for greater monitoring of managers (Jensen & Meckling, 1976). Thus, the absence of separation between ownership and control reduces conflicts of interest and increases shareholder value (Morck et al., 1988). Thus, this study examines the ownership structure in family and non-family companies. The managerial ownership is further splitted into family managerial ownership and non-family managerial ownership.

3.5.1 Managerial ownership

Managerial ownership is a way to curb agency problems by encouraging manager/ owners to consider the entrepreneurial gain, which gives them incentive to increase firm

value, rather than to shirk (Jensen & Meckling, 1976). Past studies found a nonlinear relationship between managerial ownership and firm performance (Morck et al., 1988; McConnell & Servaes, 1990). The arguments given by the researchers were that when managerial ownership increases, there is greater alignment on interests of managers and outside shareholders.

The alignment-of-interest hypothesis predicts a firm value and operating performance increases as management ownership rises (Jensen & Meckling, 1976). However, at certain levels of ownerships, managers' consumption of perquisites may outweigh the loss they suffer from a reduced value of the firm. Further, with a high level of managerial ownership and a high information asymmetry environment, managers may indulge preferences for non-value maximizing activities. Thus, entrenchment hypothesis predicts a negative relationship between performance and managerial ownership exists (Demsetz, 1983; Fama & Jensen, 1983). Research in Malaysia found that the directors' ownership is at a range of 5% to 25%, the financial performance (except for EPS) is significant. However, at other range, there is no relationship between ownership and performance (Mat Nor et al., 1999).

Some local studies evidenced that managerial ownership is a common feature in Malaysia firms. Claessens et al. (2000) found that at the 20% cut-off levels, 67% of Malaysian listed firms were in family hands, and 85% had owner-managers. Empirical studies by Mohd Sehat and Abdul Rahman (2005) reported that concentrated ownership has a tendency to increase the firm value. Ali Ahmed (2009) pointed out that there is a positive

association between managerial ownership and Malaysian firm performance. It is further supported by Mahmud et al. (2010) that managerial ownership has significantly positive association with firm performance measured using Tobin's Q and ROA which is consistent with the convergence-of-interets hypothesis. On average, 26% of shares issued by Malaysian firms are held, directly or indirectly by directors. Managerial ownership is found to be less important in large-sized firms compared to small-sized firms. Large-sized firms demand and use better corporate governance mechanisms due to higher agency conflicts, and therefore, less managerial ownership is needed for control (Mohd Ali et al., 2008).

Other experts (Short & Keasey, 1999) describe the managerial ownership as the transition between alignments affects to entrenchment affects and back to alignment effects. The coefficients on ownership and ownership-cubed is positive, while coefficient for ownership-squared is negative. At sufficiently high levels of managerial ownership, managers become entrenched in their positions resulting in a negative relation between managerial ownership and firm value (Stulz, 1988). The insiders who control corporate assets can potentially expropriate outside investors by diverting resources for their personal use or by committing funds to unprofitable projects that provide private benefits (Lemmon & Lins, 2003).

Thus, based on the arguments in the empirical studies, this study predicts that the managerial ownership has a nonlinear pattern (alignment-entrenchment-alignment) with firm performance. At a low level of ownership, when managers are rewarded with shares,

they feel happy and are motivated to work for the company. As the level of ownership increases to a certain level, managers start to manipulate or control the company by potentially expropriating the interests of the minority shareholders for their personal interests. However, when the shareholdings increase beyond, firm value starts to enhance again. Now, managers that have high shareholdings may become the substantial or controlling shareholder of the company. Therefore, the managers may want to ensure that the firm gains profits and, it is consistent with the interest of them. Therefore, it is hypothesised that:

H_7: Ceteris paribus, there is a nonlinear relationship (alignment-entrenchment-alignment) between managerial ownership and company performance.

3.5.2 Family managerial ownership

Based on the agency theory, Fama and Jensen (1983, p. 306) claims that "family ownership is particularly efficient to minimise agency problems because shares are in the hands of agents who have special relations with other decision agents that allow agency problems to be controlled without separation of the management and control decisions". Further, "family members have many dimensions of exchange with one another over a long horizon, and therefore, have advantages in monitoring and disciplining related decision agents" (Fama & Jensen, 1983). Moreover, agency costs are minimized when shares are concentrated in a few owners and those owners carry out the entire decision process (Gorriz & Fumas, 1996). As the owner-managers, they are highly motivated to

monitor the managers, thus reducing agency costs connected to hired management (Shleifer & Vishny, 1997).

While stewardship theory claims that the ownership concentration influences the effects of family relationships in family firms. Indeed, ownership concentration explains the motivation for members to act as stewards of the firm rather than to act destructively (Corbetta & Salvato, 2004). Furthermore, the relations within a family are largely characterized by loyalty and trust. These qualities may promote flexibility in operations, ease decision-making and reduce shirking, all of which may have a favourable effect upon the productivity of the business (Coleman, 1990).

However, family-companies can make sub-optimal investment decisions since the interests of the family are not necessarily consistent with those of other shareholders (Fama & Jensen, 1985). Restricted ownership also reduces external governance and potential problems may arise when a firm is headed by a powerful owner/ manager or family relationships tend to make agency problems more difficult to resolve (Schulze et al., 2001). There is possibility that family firms might use their concentrated ownership to expropriate wealth from other shareholders (Morck et al., 2000, Faccio et al., 2001; Morck & Yeung, 2003).

Therefore, based on the discussed literatures, this study predicts that ownership by family members does motivate family directors to enhance company performance. When ownership is at a low level, family members feel less responsible and have a reduced

sense of belonging to the company. However, as the family ownership increases, family managers exert more effort and work for the firm as if the company is part of them. For family companies, the majority of the wealth is invested in the family companies. Thus, family directors will maximise the shareholder wealth as well as their own wealth. Family-companies can also make sub-optimal investment decisions since the interests of the family are not necessarily consistent with those of other shareholders. Restricted ownership also reduces external governance, and there is possibility that family firms might use their concentrated ownership to expropriate wealth from other shareholders. Therefore, this study hypothesises that:

H_{7a}: Ceteris paribus, there is a nonlinear relationship (entrenchment-alignment-entrenchment) between family managerial ownership and company performance, for family-controlled companies.

However, this study predicts non-family managerial ownership to have the opposite direction to family ownership. When non-family directors own shares in the business, indirectly it gives them responsibility and commitment to work with the company. Therefore, small ownership will enhance firm value. However, when more shares are owned by non-family managers, the firm value starts to decrease. The managers may manipulate the power and control posses by them. At this level, the non-family managers have more power and interest in the company by owning larger amount of shares. So, they are more worried about their personal interest in the company, rather done looking for the benefits of the whole company, including protecting the interests of the stakeholders at large. Therefore, the decision-making may favour on their side, and not to

all the company shareholders at large. In here, there is a negative relationship between non-family ownership and company performance. However, when non-family managers own substantial shares in the company, they may want to ensure that the company give high profits or dividends to them. In here, the relationship between non-family ownership and firm performance is expected to be positive again. This study expects different trends between family ownership and non-family ownership with firm performance. Thus, this study hypothesises that:

H_{7b}: Ceteris paribus, there is a nonlinear relationship (alignment-entrenchment-alignment) between non-family managerial ownership and company performance, for non-family controlled companies.

3.6 Succession attributes

Family companies need to plan ahead to ensure that the family business can sustained for the next generation. In planning for succession, there are several factors that may influence the firm value and that need to be considered, such as a family or professional CEO lead the family company, CEO education level, CEO age, gender and family generation.

3.6.1 Family CEO or professional CEO

Empirical studies (Monsen et al., 1968; Daily & Dollinger, 1992, Anderson & Reeb, 2003; Miller & Breton-Miller, 2006) found that family-owned and managed firms

achieve higher performance than those that are professionally managed. Owner-managed firms achieve 75% higher in profit (ROE) than professionally managed firms (Monsen et al., 1968). Family firms have a higher Tobin's Q and Return on Assets when family members serve as the CEO than when using outside CEOs (Anderson & Reeb, 2003). The study found that the family CEOs play an important role in governing family firms, whereby the family members serve as managers (Miller & Breton-Miller, 2006). Agency costs are also significantly higher when outsiders manage the firms (Ang et al., 2000). Even though family-owned firms are smaller and use less aggressive strategies, these companies achieve higher performance than professionally managed firms (Daily & Dollinger, 1992). Stewardship theory argues that family directors mostly spend their working lives in the firm they govern, therefore they understand the firms better than outside directors and they are able to make superior decisions (Donaldson & Davis, 1991, 1994).

Nevertheless, other studies claim that professionals play a significant role in the family firms performance (Chrisman et al., 1998; Gallo, 1995; Ibrahim et al., 2001; Anderson et al., 2009; Adams et al., 2009; Hiller & McColgan, 2009; Johl, 2010). The professionals may hold particular knowledge about the firm that may prove valuable in the mentoring of future-generation leaders, or filling in the leadership role (Lee et al., 2003). In larger firms, professionals play a critical role in strategic decision-making (Chua et al., 2003). Management succession is better when using a professional manager and it has a positive impact on the performance (Lauterbach & Vaninsky, 1999; Chittoor & Das, 2007).

Even though professionals are more qualified, family companies only hire professionals after the companies reach a critical size because they believe that the professional interest may not be aligned with the interest of the family (Bhattacharya & Ravikumar, 2001). Outsiders will not be appointed unless an incremental improvement relative to inside directors is expected, because it is more costly to appoint an outsider (Dalton & Kesner, 1985). Furthermore, the knowledge and skills of professionals are used to help enhance the family firms value during poor operating performance (Smith & Amoako-Adu, 1999). Based on the above literatures, there are mixed arguments. However, this study presumes that family CEOs play a major role in enhancing family firms' performance than professional CEOs. Family CEOs have the power, control, understand the firm better, and, are able to influence the family board greater than a professional CEO who is an outsider to the family business. Thus, it is hypothesised that:

H_8: Ceteris paribus, there is a positive relationship between family CEO and company performance.

3.6.2 CEO education background

A study in the US evidenced that two-thirds of family businesses do not require family members to have the qualifications or related experience necessary to be successful when entering the business (Tyee, 2007). In Lebanon, companies do not require qualifications for family members entering the business (Fahed-Sreih, 2009). It is claimed that the informal training received by the children within the family may be a substitute to formal managerial training received through educational institutions (Lentz & Laband, 1990).

Owners need to consider the suitability of the successor, particularly the level of education that the successor possesses in managing the family firms. This is to ensure the survival and growth of the firms (Ibrahim & Ellis, 1994). Successors are opting for college instead of several years of experience working with someone else. In the past, family CEOs were found to possess fewer college degrees (Brockhaus & Nord, 1979). However, today, many youngsters go to college instead of acquiring several years of experience in the work place (Goldberg, 1996). The owners of family are encouraged to send their sons and daughters for skills training ahead of other staff. Studies reveal that family businesses show a positive relationship between education and innovation (Kimberly & Evanisko, 1981). Indirectly, an educated CEO may help increase firm value.

Based on the above arguments, education plays a vital role in enhancing firm performance. Family firms need to have successors that are educated, skilful and knowledgeable of family business operations. Only then can family firms be sustained in today's competitive atmosphere. Therefore, it is hypothesised that:

H_9: Ceteris paribus, there is a positive relationship between CEO education level and company performance.

3.6.3 CEO age

The family's approach to succession planning is often highly related to the founder's age (Lansberg, 1988). As the owner gets older, his or her awareness of the need to prepare for the transfer of ownership and control increases. Therefore, owners need to plan for

succession (Harveston et al., 1997). Research indicates that older executives tend to have a stronger commitment to the organization (Becker, 1974), take a longer time to make decisions, seek a greater amount of information, are more conservative and better in making judgment (Muth & Donaldson, 1998).

Brockmann and Simmonds (1997) argue that managerial success is positively correlated with age and as the level of experience that a manager possesses increases, this is proportionate to their increase in age. Older executives also tend to be more risk averse than younger executives (Carlsson & Karlsson, 1970) and are less likely to undergo major strategic changes (Golden & Zajac, 2001).

A young person is more willing to take risk and to change (Wiersema & Bantel, 1992), pursue more risky and innovative growth strategies (Guthrie & Olian, 1991) and appears to handle new and creative ideas better than older managers (Campbell et al., 1996). Studies show that the stock market reacts negatively to the appointment of family successors. However, investors have less confidence in young successors, which is reflected as a lack of management experience in the successors (Smith & Amoako-Adu, 1999).

Based on the literatures discussed above, CEO age is important in ensuring that firm performance is enhanced and sustained. However, past literatures reveals mixed findings. Thus, based on the arguments, it is hypothesised that:

H_{10}: Ceteris paribus, there is a relationship between CEO age and company performance.

3.6.4 Gender

Several studies found that male-owned businesses outperformed female-owned businesses (Loscocco, et al., 1991; Fischer, et al., 1993; Shim & Eestlick, 1998; Fasci & Valdez, 1998; Alowaihan, 2004). Firms owned by men outperformed firms owned by women in terms of sales volume and income. Women lack industry experience and they concentrate on less profitable sectors (Loscocco, et al., 1991). Men-owned businesses exhibited a higher level of productivity than those of women in terms of sales per employee. Moreover, women have less business experience, which creates a barrier to business (Fischer, et al., 1993). Women are older than their male counterparts and have higher education levels, but women-owned firms financial performance was significantly lower than men-owned firms because the women have less business experience (Alowaihan, 2004).

A study by Shim and Eestlick (1998) found that Hispanic female business owners had fewer years of business experience, fewer employees, and smaller annual sales than their male counterparts. There is a significant difference between male-owned firms and female-owned firms with respect to the ratio of profit to gross revenue. Work experience and age of business contributed significantly to the difference in firm performance (Fasci & Valdez, 1998). Women business owners are found to undercapitalise their firms,

typically investing approximately only one third of the capital used by men (Shaw et al., 2009).

Based on the arguments, this study expects that there is a relationship between male CEO and firm performance. Males have a greater chance of being the successor for family firms. Males are more supportive, tough and able to faced competition. There is a perception that males perform better than females. Moreover, males get more support from families. Like a monarchy system, Asian values place an important role on the son compared to the daughter. That is why male owners succeed most in Malaysian family firms. It is hypothesised that:

H_{11}: Ceteris paribus, there is a relationship between male CEOs and company performance.

3.6.5 Family generation

Generation adds valuable experience to the family and the firm (Astrachan et al., 2002). The desire to let subsequent generations inherit the firm makes the family shareholders keener than the other shareholders to ensure the long-term survival of the firm (Anderson et al., 2003). A study by Zahra (2005) found that multiple generations may bring fresh insights, experiences and new knowledge into family firms, thereby improving the firm value. Stewardship theory claims that family members that act as stewards often commit deeply to the mission of the firms, treasure its employees and stakeholders and feel

motivated to do their best for the family and the organization as a collective (Corbetta & Salvato, 2004; Davis et al., 2000; Miller & Le Breton-Miller, 2005).

Firm performance improves when founding family members are involved in management (Lee, 2006). Founder-controlled firms grow faster and invest more in capital assets and research and development. Meanwhile, the descendant-controlled firms generate more profit because of the experience of the founder (McConaughy & Philips, 1999). Barontini and Caprio (2006) confirm the finding that market valuation and operating performance are higher in founder-controlled corporations and at least not worse in descendant controlled firms. Sraer and Thesmar (2007) show that family firms outperform founder-CEO firms as well as heir-managed firms. However, Morck and Yeung (2003) argue that the successor is likely to be less able to manage the firms when corporate control passes from the founder to the next generation. Studies evidence that firm value is enhanced when companies are managed by the founder generation, but not by later generations (Rodsutti & Makayathorn, 2005; Smith & Amoako-Adu, 1999). Another study in the US evidenced that firm value is destroyed when descendants serve as CEOs (Villalonga & Amit, 2006).

Based on the above mentioned arguments, it is expected that the founder-CEO enhances firm performance more than the successor-CEO. These arguments are based on the founders being more experienced, having built the business from scratch working day and night, and saving and investing the money to enlarge the company business. However, when the companies make a profit and are stable in business arena, the

founders usually start to transfer to the younger generation. The younger generation either takes over the work of the founder or just maintains the empire and wealth that the founder has built. Therefore, there is a tendency that the money is being spent excessively without proper planning and monitoring. Thus, it affects the business performance and it could destroy the firm value. Therefore, it is hypothesised that:

H_{12}: Ceteris paribus, there is a positive relationship between founder (first generation) and company performance.

3.7 Conclusion

This chapter begins with a discussion on the theoretical framework, followed by the development of the related theories and empirical evidences from previous literatures. The justifications for the development of the conceptual framework and hypotheses are also highlighted. Finally, the research methods to test these hypotheses are presented in the next chapter.

CHAPTER 4

RESEARCH METHOD AND DESIGN

4.1 Overview of the chapter

This chapter is divided into seven sections. This chapter outlines the procedures in developing and conducting the research, including the three equations used to test the hypotheses described in the previous chapter. In Section 4.2, the study explains the data collection process, the sample selection and the instrument used in this study. This is followed by a description on panel data used in the data analysis in Section 4.3. Section 4.4 explains the data analysis and interpretation of the models. Followed by Section 4.5, which explains the research models used in this study. Section 4.6 describes the variables and measurements used in the models. The final Section 4.7 summarises the research method and design used in the study.

4.2 Data collection

This study uses secondary sources in gathering the data. Secondary sources are interpretations of primary data (Cooper & Schindler, 2003). Secondary data includes both quantitative and qualitative data, which can be used in both descriptive and explanatory research (Kervin, 1999). This study used the company annual reports, financial database from Thomson, books, magazine articles and newspapers in gathering the necessary

information. The data on company annual reports was gathered from downloading the website (www.bursamalaysia.com), with the financial database being downloaded from the Thomson Advance Database[13], and from books on family business and ownership structures and newspapers. The main advantage of using the secondary data is the enormous saving in resources, in particular, time and money (Ghauri & Gronhaugh, 2002). Secondary data is likely to be higher-quality data than collecting one's own (Stewart & Kamins, 1993), and it provides a source of data that is both permanent and available in a form that may be checked relatively easily by others (Denscombe, 1998).

4.2.1 Sample and population

This study applies panel data study for five continuous years from 2003 to 2007. A static panel is adopted, where the same companies serve on the panel over five years. The main advantage of the static panel is that it offers a sensitive measurement of the changes that take place between points in time (Cavana, Delahaye & Sekaran, 2000). The years 2003 until 2007 were selected as 2007 was the latest financial year for which all companies' published annual reports were available at the time when the data collection started. In addition, PLCs have a few months after the financial year-end to publish the annual reports[14]. Starting from 30 June 2001 onward, all PLCs need to disclose their corporate governance practices, therefore, it is interesting to examine whether PLCs do apply the

[13] Available at Sultanah Bahiyah Library, Universiti Utara Malaysia.

[14] Under paragraph 9.23 (a) of the BM Listing Requirements, the annual audited accounts together with the auditors' and directors' reports shall, in any case, be given to the Exchange for public release, within a period not exceeding 4 months from the close of the financial year of the listed issuer unless the annual report is issued within a period of 4 months from the close of the financial year of the listed issuer.

Code as guidance for managing their businesses and protecting the shareholders wealth or vice versa. Thus, data for PLCs for years 2003 to 2007 are the most suitable for this study.

This study begins with the identification of the population of the study, which includes the companies listed on the Main and Second Board of Bursa Malaysia. However, companies classified under the finance sector, unit trusts and REITS are excluded from this study because of their unique features and business activities as well as differences in compliance and regulatory requirements. As at 31 December 2003, excluding the finance and banking sectors, Bursa Malaysia's listing statistics, according to its website (http://www.bursamalaysia.com) reported a total of 874 listed companies as at this date. Out of these, 598 companies were listed on the Main Board and 276 companies on the Second Board.

Table 4.1

Sample Selection

	Number of companies
Total PLCs listed on Bursa Malaysia as at 31 December 2003	874
Finance And Unit Trust	76
PN4	32
Closed End Fund	1
Total non-financial PLCs	765
Incomplete financial data	33
Incomplete board governance data	119
Incomplete ownership data	193
Total PLCs in year 2003	420
Total PLCs in the sample for 2003 to 2007	2100

From the total number of 874 companies listed on Bursa Malaysia, as at 31 December 2003, 109 companies relating to financial, unit trust and closed-end fund companies were excluded because these companies have a different regulatory framework that does not apply to other listed companies. The remaining non-financial PLCs included 765 companies which was then reduced by the removal of 345 companies with incomplete financial and board governance data. The final sample in this study was 420 PLCs and the total observations for the five years were 2,100.

PLCs were chosen because of various advantages over non-listed companies. The main reason is that PLCs have published annual reports that are publicly available and that can be assessed using the Bursa Malaysia website[15]. The annual reports of PLCs are also presented in a uniform way, and the data is subject to the Bursa Malaysia regulations and Companies Act 1965. The data for PLCs is also available in Thomson Datastream. This source complements the annual reports. The Thomson Datastream is also useful to obtain other data that is needed but not found in the annual reports such as market share prices. Lastly, the use of PLCs enables a comparison to be made with previous studies conducted in Malaysia as majority of the Malaysian studies used PLCs.

[15] http://www.bursamalaysia.com

4.2.2 Instruments

The data for this study was hand-collected from secondary sources, mainly from the company annual reports. In addition, this study also used the KLSE Annual Handbook and Thomson Financial Datastream Advance[16]. The main concern during data gathering is the accuracy of the data. Therefore, to enhance the data accuracy, data was cross-referenced to other sources whenever possible. In the annual report, data relating to the directors report, directors' profile, shareholding statistics, statement of directors' shareholdings, the financial statements and notes to the accounts was scrutinised.

In determining the family-controlled companies, the first steps taken were to list all the named PLCs in the worksheets. Then, from the information in the company annual reports, the worksheets were completed with the relevant information to meet the family-controlled company criteria. In this study, a family-controlled company is defined as: (1) Founder is the CEO or successor of CEO related by blood or marriage, (2) with at least two family members in its management, and (3) family directors have ownership (direct and indirect) of minimum of 20% in the company. If the three criteria were fulfilled, then the company was considered as a family-controlled company. The difference between this measurement of family-controlled company defined in this study as compared to past studies are that past studies (La Porta et al., 1999; Floren, 1998; James, 1999; Yeh et al., 2001; Anderson & Reeb, 2003; Lee, 2004, 2006; Chrisman et al., 2005; Barontini &

[16] The Datastream database is available in Sultanah Bahiyah Library, Universiti Utara Malaysia. Financial data was downloaded using the Thomson Financial Datastream Advance.

Caprio, 2006; Maury, 2006; Miller & Breton-Miller, 2006; Villalonga & Amit, 2006; Martinez et al., 2007; Chen et al., 2008; Abdul Samad et al., 2008, Wan-Hussin, 2009) do only consider to look at either one of the criteria mention above as whether the company have CEO founder or successor who is related by blood or marriage, or the family ownership of minimum 20% in the company. While Wan-Hussin (2009) measure family firm is proxied by the proportion of family members on the board. Thus, the previous studies were less rigid on the measurement of family firm.

However, in this study the family-controlled company measurement must also include that at least two family members sitting on the management board. And this measurement has not been considered yet by any other studies before. In identifying the CEO founder or successor, the annual report in section "Director's Profile" is referred to search for any relationship with the family business. Besides that, the business magazines such as Malaysian Business and newspapers The Star and News Strait Times were used to gather the information. Identifying at least two family members in its management is done by referring to the annual report section "Director's Profile", reading through the newspapers and business magazines for the information. For 20% (direct and indirect) shareholding the information was gathered through Bursa Malaysia database and it is cross-checked with the information available in the annual report.

For example, Berjaya Land Berhad has been identified as one of the family-controlled companies in this study. So, the process was done in this study by referring to "Director's Profile" section and scrutinizing this part one by one director to seek for the information.

Tan Sri Dato' Danny Tan Chee Sing (Deputy Chairman) was found to have a family relationship with his nephew, Dato' Robin Tan Yeong Ching, who is the Chief Executive and his brother, Tan Sri Dato' Seri Vincent Tan Chee Yioun is a major shareholder of the Company. So, the first criteria (1) where CEO founder or successor is family member is fulfilled and criteria (2) with at least two family members are also met (i.e. Tan Sri Dato' Danny Tan Chee Sing and Dato' Robin Tan Yeong Ching are related). To gather information on ownership, the Bursa Malaysia database and the annual report "Statement of Directors' Shareholdings" was referred too to reconfirm the figures. In this study, the family members do own 24.6% shares in the company. Thus, criteria (3) was also fulfilled where at least family shareholdings of 20% (indirect and indirect shares). When all the three criteria were met, then the company is recognised as family-controlled company.

The information on boards such as board size, board independence, leadership structure and director's education background was extracted from the directors' report and directors' profile. Information on directors' shareholding was gathered from the Bursa Malaysia database and annual reports, while the directors' background was extracted from the directors' profile in the annual reports.

Financial data such as total assets, net income, earnings before interest, tax, depreciation and amortisation (EBITDA), shareholder's equity, return on assets (ROA), return on equity (ROE), earnings per share (EPS), long term debt and operating cash flow was gathered from the financial statements and notes to the accounts. In addition, information

needed to be calculated such as Tobin's Q where the market value of ordinary shares is obtained from the Thomson Financial Datastream Advance. Then, the data gathered from the financial statements was cross-checked with the data produced by the Thomson Financial Datastream Advance.

For succession, some of the data was gathered from the company annual reports such as type of CEO whether he/she is a family member or outsider, age of the CEO, gender and academic qualification. For generation, if the information was not available from the company annual report, the information was obtained from other sources such as business magazines, books, newspapers and company announcements.

All the data gathered was then transferred into the worksheets. Then, the information on corporate governance (board and ownership), succession and financial information was matched with the name of the PLCs. Furthermore, before further work was done, the researcher established whether the data was available for the five consecutive years (2003 to 2007). Once the data was complete, then final sample was determined.

Table 4.2

Data Sources

	Sources	Related information
Board Governance Data	Annual reports	Director's name, designation (i.e. executive, non-executive, independent, alternate), directors on the board, academic and professional qualification).
	Datastream	Director's name, designation.
Financial Data	Annual reports	Income statement, balance sheet and cash flow information.
	KLSE Annual Handbook	Financial ratio (ROA, ROE, EPS).
	Datastream	Market value of ordinary shares, book value of preferred shares, debt, and book value of total assets.
Ownership Data	Annual reports	Name of shareholders, number of shareholdings by each director (direct and indirect), and total shares issued.
	Bursa Malaysia database	Name of directors, designation, and number of shareholdings (direct and indirect).

	Sources	Related information
Succession Data	Annual reports	CEO name, type of CEO (family CEO or outsider), CEO education, qualification, CEO age, and gender.
	Business magazines, Books and Newspapers	Family generation, and type of CEO.
Control Variables	Annual reports	Debt, and total assets.
	Datastream	Debt, total assets, listing date, and incorporation date.
	KLSE Annual Handbook	Listing date, incorporation date, and industry classification.

As shown in Table 4.2, most of the information was collected from the company annual reports. The majority of economic and financial research in corporate governance uses publicly reported financial accounting data in company annual reports. Accounting data and corporate disclosure in the annual report can enable the monitoring of agent decisions in choosing strategies within the limits of available resources and assist in decision making (Sloan, 1996). Hence, this study employs quantitative analyses and uses data from the annual reports to understand the relationship between family-controlled companies, corporate governance (board and ownership), and succession attributes with firm performance.

PLCs annual reports are prepared according to International Accounting Standards (IAS) and are approved by an independent and statutory accounting standard-setting body, the Malaysian Accounting Standard Board (MASB). Therefore, one can have a high degree of confidence concerning the reliability of the data. The information found in various sections of the annual reports is displayed in Table 4.3.

Table 4.3

Various sections in annual reports used in data gathering

Sections in the annual reports	Information collected from the sections
Director Profile	Name, designation, age, education qualification, professional qualification, gender, and family generation.
Corporate governance report	Board size, and board composition.
Director's report	Director shareholding.
Analysis of shareholding	Director shareholding.
Financial statement	Financial information.

4.3 Panel data

Panel data analysis allows for the consideration of both the cross-sectional and time series effect in the sample, and helps in identifying the sources of possibly mingled

effects. The general estimated equation for analysing panel data is given by the following equation:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 X_{it} + \ldots + \beta_n X_{it} + \varepsilon_{it}$$

Where i denotes the firm (cross section dimension) and t denotes time (time series dimension). Therefore, Y_{it} is the dependent variable of pooling N cross sectional observations and T time series observations, and X_{it} s are the independent variables pooling N cross sectional observations and T time series observations. β_0 Is the constant term or intercept across cross sectional observations, and ε_{it} is the error term. $\varepsilon_{it} = \mu_i + \nu_{it}$, where μ_i denotes the unobservable individual firm specific effect and ν_{it} denotes the remainder of the disturbance or error term.

Within the social sciences, panel analysis has enabled researchers to undertake longitudinal analyses in a wide variety of fields. With repeated observations of enough cross-sections, panel analysis permits the researcher to study the dynamics of change with short time series. The combination of time series with cross-sections can enhance the quality and quantity of data in ways that would be impossible using only one of these two dimensions (Baltagi & Wu, 1999; Greene, 2003; Gujarati, 2003).

Panel data analysis endows regression analysis with both a spatial and temporal dimension. It is possible to control for some types of omitted variables even without observing them, by observing changes in the dependent variable over time. This controls for omitted variables that differ between cases but are constant over time. It is also possible to use panel data to control for omitted variables that vary over time but are

constant between cases. There are several types of panel data analytic models. There are constant coefficients models, fixed effects models, and random effects models.

4.3.1 The constant coefficients model

One type of panel model has constant coefficients, referring to both intercepts and slopes. In the event that there are neither significant spatial nor significant temporal effects, all of the data will be run using an ordinary least squares regression model. Although most of the time there are either spatial or temporal effects, there are occasions when neither of these is statistically significant. This model is sometimes called the pooled regression model (Stock & Watson, 2007).

4.3.2 The fixed effects model

Another type of panel model would have constant slopes but intercepts that differ according to the cross-sectional (group) unit, for example, companies. Although there are no significant temporal effects, there are significant differences among companies in this type of model. While the intercept is cross-section (group) specific and it differs from one company to another company, it may or may not differ over time.

In testing the effects of the fixed effects model, the pooled regression model is used as the baseline for comparison. First, the researcher tests the group (companies) effects and the time effects. This can be done by a contrast, using the first or last time point as a

reference. Assume that the sum of the time effects is equal to zero, then a paired *t* test between the reference and test value is conducted. The researcher tests for group, time, and interaction effects, assuming that not all the degrees of freedom have been consumed. By conducting this test, an improvement in the R^2 without a problem with autocorrelation is expected.

Because fixed effects estimators only depend on deviations from their group means, they are sometimes referred to as within-groups estimators. If the cross-sectional effects are correlated with the regressors, then the cross-sectional effects will be correlated with the group means. Ordinary least squares estimation on the pooled sample would be inconsistent, even though the within-groups estimator would be consistent. If, however, the fixed effects are uncorrelated with the regressors, the within-groups estimator will not be efficient. If there is only a variation between the group means, then it would be permissible to use the between-groups estimator, but this would be inconsistent if the cross-sectional errors are correlated with the group means of the regressors (Davidson & MacKinnon, 1993).

4.3.3 The random effects model

The random effects model is a regression with a random constant term. One way to handle the ignorance or error is to assume that the intercept is a random outcome variable. The random outcome is a function of a mean value plus a random error. However, this cross-sectional specific error term v_i, which indicates the deviation from

the constant of the cross-sectional unit (in this example, companies) must be uncorrelated with the errors of the variables if this is to be modelled (Greene, 2003).

4.3.4 Choosing between fixed and random effects

The generally accepted way of choosing between fixed and random effects is running a Hausman test. Statistically, fixed effects are always a reasonable thing to do with panel data (they always give consistent results) but they may not be the most efficient model to run. Random effects will give better p-values as they are a more efficient estimator, and are, therefore more appropriate if it is statistically justifiable to do so.

The Hausman test checks a more efficient model against a less efficient but consistent model to make sure that the more efficient model also gives consistent results. To run a Hausman test comparing fixed with random effects in STATA, first one must estimate the fixed effects model, save the coefficients and compare them with the results of the next model, estimate the random effects model, and then do the comparison. The Hausman test check the null hypothesis that the coefficients estimated by the efficient random effects estimator are the same as the ones estimated by the consistent fixed effects estimator. If they are (insignificant p-value, prob>chi^2 larger than 0.05) then it is safe to use random effects, however if the p-value is significant, the fixed effects should be used (Greene, 2003; Stock & Watson, 2007).

4.4 Data analysis and interpretation

Before analyses are conducted, data must be ready by cleaning and screening the data. Then, diagnostic tests are carried out and lastly the panel GLS method is applied to the models.

4.4.1 Getting data ready for analysis

Cleaning and screening of data prior to the main analysis is the consuming and sometimes tedious, but careful consideration and resolution of the issues before the main analysis is tested, and is fundamental to ensure an honest analysis of the data (Tabachnick & Fidell, 1996, p. 57). Once all the data is entered into the worksheet, the incomplete data is excluded from the study.

Data is entered and processed using statistical package for social science (SPSS), Version 17 and Stata, Version 8. Some preliminary steps need to be completed before the hypotheses are tested to ensure that the data is reasonably good and of assured quality. The preliminary steps include getting data ready for analysis (Sekaran, 2003, p. 301) by cleaning and screening the data.

4.4.2 Diagnostic tests

Before each model can be tested in the study, regression diagnostics were done to verify that assumptions of multiple regressions are met and to avoid misleading results. The discussion of diagnostics tests start with checking for outliers, normality and linearity tests of the sample in this study. Next the multicollinearity, heteroscedasticity tests and autocorrelation test are discussed. Then, the model estimation is discussed in the later part.

4.4.2.1 Outliers

Outliers are observations that have their own unique characteristics that make them different from others (Hair, Black, Babin, Anderson & Tatham, 2006). There are three ways of identifying an outlier or unusual observation (Hamilton, 2003; Chen et al., Stata Web Books). First, is using the studentized residual to detect observation in which the dependent variable is unusual for certain values of the independent variables. Observations with a high studentized residual, normally above +2 or -2, are concerned (Chen et al., Stata Web Books). Next, leverage is used to find out whether an observation of an independent variable has deviated from its mean and which may affect the estimation of the regression coefficients. An observation with high leverage has the potential to be an influential outlier. According to the rule of thumb, observations with leverage of more than 2k/n where k is the number of independent variables and n is number of observations (Hamilton, 2003) are relevant. The third method to detect outliers

is by identifying an influential observation that may significantly change the estimate of coefficients when the observation is dropped. Cook's distance is applied in this study. The higher the Cook's distance that the more influential the observation. Hamilton (2003) and Chen et al. (Stata Web Books) highlight a cut-off point of 4/n where n is the number of observations. Several types of graphs are used to visualise the potential outliers such as scatter plots, stem and leaf plot, boxplot of studentized residuals and leverage, and plot of leverage by residual squared.

Observations that have the potential to be influential outliers are identified. The impact of the outliers can be beneficial or problematic, and have to be examined to determine whether they should be included in the sample or discarded (Hair et al., 2006). After deleting the outliers, multiple regressions are run again to see if there are differences in the estimated coefficients. If the difference is not significant, no outlier is eliminated. Hair et al. (2006) suggest that outliers should be retained to ensure generalization of the entire population unless there is evidence that they do not represent the population. Since outliers were not deleted, robust regressions using Stata command, where less weight is given to the outliers, were also done to check on the robustness of the models.

4.4.2.2 Normality and linearity

Normality means that the distribution of the error (or residuals) is normally distributed. Normality for each variable is checked using a histogram. In multiple regressions, normality is not required to estimate the regression coefficients, but is needed for valid

hypothesis testing (Hair et al., 2006; Chen et al., Stata Web Books). Data is explored to ensure that normality assumptions hold true to use the parametric tests. To check on normality, several graphs based on predicted residual are used: kernel density estimate plot, standardized normal probability plot (P-P normal probability plot) and also the quartile of a variable versus the quartile of a normal distribution plot (Q-Q normal probability plot). Normality can also be assessed by obtaining the skewness and kurtosis values of the variable (Pallant, 2001). Alternatively, statistical tests such as the Shapiro-Wilks tests and Kolmogorov-Smirnov test can also be conducted. The relationship between the dependent variables and independent variables should be linear (Hair et al., 2006). In regression, nonlinearity is not a problem if the standard deviation of the dependent variable is more than the standard deviations of the residuals.

4.4.2.3 Multicollinearity

An important assumption underlying multiple regression analysis is that there should be no exact collinearity existing between two independent variables, this is referred to as multicollinearity (Cheng, Hossain & Law, 2001). High multicollinearity causes the estimated regression coefficient to become unreliable and unstable, so that it might change drastically if small changes occur in the sample or model (Hamilton, 2003). This problem may affect the result of the model tested, as it will be difficult to accurately estimate the coefficient of the true model (Cheng et al., 2001).

Therefore, data must be checked for the possible existence of multicollinearity. This is important as it can cause a researcher to obtain wrong signs for the regression coefficient, insight t-ratios, high R squared but few insignificant t ratios and high pair-wise correlation among regressors (Cheng et al., 2001; Green, 2003; Gujarati, 2003).

Hence, the researcher inspects the data in this study to check for any multicollinearity problem. The simplest way to check for multicollinearity is by examining the correlation matrix for the independent variables. The rule of thumb is that a value of 0.8 is acceptable (Bryman & Cramer, 1990). A correlation of 0.9 and above indicates a serious problem (Hair et al., 2006; Pallant, 2001). Another method is to use a variance inflation factor (VIF). The VIF for independent variables shows how coefficients' variance and standard errors of other variables increase due to the inclusion of the variable (Hamilton, 2003). The rule of thumb says that the variable is said to be highly correlated if the VIF is more than 10 (Hair et al., 2006; Ho, 2006; Gujarati, 2003). By dropping one of the collinear variables, the problem is solved (Hair et al., 2006; Wooldridge, 2003; Cheng et al., 2001).

4.4.2.4 Heteroscedasticity

The presence of an unequal variance of the residual (heteroscedasticity) is one of the common violations in multivariate analysis (Hair et al., 2006). Heteroscedasticity is a problem that occurs when the variance of errors is not constant over the sample observation. This problem needs to be addressed as it can give a biased value for true variance, the OLS estimators will be inefficient. It may also result in higher t and F

values meaning that the null hypotheses may be rejected when they should not be rejected if the problem is addressed (Cheng et al., 2001).

The heteroscedasticity problem can be detected using the White General Heteroscedasticity Test, Breuch-Pagan Godfrey Test, Part Test or Glejser Test (Gujarati, 2003; Wooldridge, 2003; Green, 2003). The Cook-Weisberg 1994 test (a non-graphical test) is also able to detect heteroscedasticity and is used to examine whether the squared standardized residuals are linearly related to the dependent variables (Hamilton, 2003). The null hypothesis that the variance of the residuals is homogeneous is tested. Thus, a p value greater than 0.05 means failure to reject the hypothesis, and, therefore the variance of the residual is homogeneous.

If the problem of heteroscedasticity is detected, it can be resolved by using White's Heteroscedasticity Consistent Variance and Standard Error technique, Weighted Least Square approach or by transforming the data (Hair et al., 2006; Gujarati, 2003; Cheng et al., 2001).

4.4.2.5 Autocorrelation

Autocorrelation is a violation of the assumption that the errors are uncorrelated and independent, and that the size and direction of one error term has no bearing on the size and direction of another. In terms of notation, OLS assumes: $E(u_i u_j) = 0$. While autocorrelation can be associated with the cross-sectional data (called spatial

autocorrelation), it is usually associated with time series data. Time series data is, by definition, ordered in time (usually note the difference by indexing by t). The past is the best predictor of the future. It is claimed that what occurs in time t is the best predictor of what will occur in time $t+1$. As a result, observations are not usually independent. For the error term, this means that differences between the predicted and actual (error) in one time period, are probably related (positively) to error in the next. If a series is "mean-reverting," then errors may be negatively correlated.

Other causes of autocorrelation may be due to model misspecification and data manipulation. A time series is created by aggregating the data and introducing a certain amount of smoothing by creating a quarterly data set by summing or averaging over months (or months from days, or quarters to years). Thus, some of the randomness of disaggregated data is lost. This smoothing can lead to systematic patterns in the error terms, thus, leading to the possibility of autocorrelation.

There are various methods to detect autocorrelation. One of the methods is by using the Wooldridge Test. This method tests for serial correlation in random or fixed-effects one-way models derived by Wooldridge (2002). Drucker (2003) adopted the Wooldridge Test to identify serial correlation in the idiosyncratic error term in the panel-data model.

Another way to determine if autocorrelation exists is by using the Durbin-Watson test. When reporting regression results for time series it is absolutely standard to report the Durbin-Watson d test for autocorrelation. A d closer to 0 means positive autocorrelation,

a d closer to 4 means negative autocorrelation. In order to determine how close to 0 or 4 is close enough to determine that the model has either positive or negative autocorrelation, there are both upper and lower critical values for d, which depend on the number of observations (N) and the number of explanatory variables (k).

When there is autocorrelation, the model needs to be transformed so the error term in the transformed model is serially independent (no autocorrelation). This process is known as generalized least squares (GLS). If there is a small number of observation, using GLS presents a problem. Therefore, there is an alternative method, which is to transform the first observation using the Prais-Winsten transformation. However, if the sample is relatively large, GLS estimates will not usually be overly harmed by one missing observation.

4.4.3 Model estimation

The panel generalized least square (GLS) over the five year test period is used rather than the ordinary least square (OLS). The use of pooled OLS would be optimal if the residuals are cross-sectional uncorrelated and there is homoscedasticity across firms (Baltagi 2001). While the OLS estimates are still unbiased and consistent under the violation of normality and constant variance, the estimates are inefficient. The estimated standard errors are biased and inconsistent, thus the results of the test statistics are also biased and inconsistent. Therefore, under these circumstances, GLS is the proper estimation method because it effectively standardizes the observations (Baltagi 2001; Greene 2003). GLS is

able to run regression for data with normality problems. GLS is claimed as the OLS on the transformed variables that satisfy the standard least square assumptions (Gujarati, 2003; p. 396). Given that coefficients may be constant over time, estimating using panel regression becomes more efficient. In addition, panel estimation can be used to examine the sensitivity of the results to alternative specifications (Gujarati, 2003).

4.4.3.1 GLS estimation method

In order to test the equation for the proposed models, this study employs panel data regression. Panel data methodology is used in this study because it allows the elimination of the unobservable heterogeneity that different companies in the sample data could present (Himmelberg, Hubbard, & Palia, 1999). Panel data regression has some advantages over regression that run cross-sectional or time-series regression independently. Among the prominent advantages are, first, by combining time-series and cross-sectional observations, the panel data gives more informative data, variability, less collinearity among the variables, more degrees of freedom, and greater efficiency. Next, by making data available for several thousand units, panel data can minimise the bias that might result if individual or company level data is divided into broad aggregates. Lastly, panel data can better detect and measure the effects that simply cannot be observed in pure cross-section or pure time-series data (Gujarati, 2003; Baltagi 2001).

The classical normal linear regression assumes that the error term is constant over time periods and locations. If such an assumption is true than it is said that homoscedasticity

exists. However, if there are variations in the observation, it may cause the variance of the error term produced from the regression not to be constant and, as a result, the problem of heteroscedasticity prevails. Hence, if that occurs, the estimates of the dependent variable become less predictable (Gujarati 2003). Unlike GLS, estimation using OLS could not remedy this problem. This is because OLS adopts the criterion of minimizing $\sum \hat{u}_i^2$ (sum of residuals squares). Under this technique, each of the error terms is given equal weight even though some of the error terms are much closer to the sample regressions functions. In other words, all errors receive equal importance (unweighted) no matter how close or how widely the individual error is scattered from the sample regression function.

The GLS, on the other hand, minimizes the weighted sum of residual squares. In GLS, the weight assigned to each error term is proportional to its σ_i (variance of the error term). That is, an error term that comes from a population with a larger σ_i will get a proportionately larger weight in minimizing the residual sum of squares (RSS). The idea here is to give less weight to an error term that is closely clustered around their mean than those that are widely scattered about. The GLS accounts for such problems by assigning the appropriate weight to different error terms and this produces the ideal constant variance. Thus, if the problem of non-constant error term has been accounted for explicitly, the GLS is capable of producing estimators that *Best Linear Unbiased Estimators* (BLUE) (Gujarati 2003).

4.5 Research model and measurement

Equation 1 (All companies) is as follows:

$$FPERF = b_0 + b_1FCF_{it} + b_2BSIZE_{it} + b_3BINED_{it} + b_4BDEG_{it} + b_5BEXP_{it} + b_6LSHIP_{it} + b_7MOWN_{it} + b_8MOWN^2_{it} + b_9MOWN^3_{it} + b_{10}DEBT_{it} + b_{11}FAGE_{it} + b_{12}LNFSIZE_{it} + b_{13}CP_{it} + b_{14}IP_{it} + b_{15}TS_{it} + b_{16}PROP_{it} + b_{17}OTHERS_{it} + \alpha_i + \lambda_t + u_{it} \quad \textbf{(Equation 4.1)}$$

Notes: FPERF=Firm performance, FCF=Family-controlled company, BSIZE=Board size, BINED=Board independence, BDEG=Directors with degree qualification, BEXP=Directors with professional qualification, LSHIP=Leadership structure, MOWN=Managerial ownership, $MOWN^2$=Managerial ownership^2, $MOWN^3$=Managerial ownership^3, DEBT=Company's debt, FAGE=Firm age, LNFSIZE=Firm size, CP=Consumer product, IP= industrial product, TS=Trading services, PROP=Properties, OTHERS=Plantation, construction, infrastructure projects, technology, hotel and mining.

Equation 4.1 is tested using panel data regression analysis for family-controlled and non-family controlled companies (full sample). Equation 4.1 is derived from reference to work from previous researchers (Mishra et al., 2001; Anderson & Reeb, 2003; Villalonga & Amit, 2006) and includes two new variables identified by the researcher, which are to be tested in this study: 1) director's qualification (BDEG) and 2) professional qualification (BEXP). Equation 4.1 tests the hypotheses relating to corporate governance mechanisms (board and ownership) with firm performance, which includes Hypotheses H_1, H_2, H_3, H_4, H_5, H_6 and H_7. In summary, the dependent variables are firm performance (accrual and cash flow based) as explained in detail in Section 4.6.1 and the independent variables are the corporate governance mechanisms attributes as suggested by the literature as explained in Section 4.6.2.

Equation 2 (Family-controlled companies) is as follows:

$$FPERF = b_0 + b_1BSIZE_{it} + b_2BINED_{it} + b_3BDEG_{it} + b_4BEXP_{it} + b_5LSHIP_{it} + b_6FOWN_{it} + b_7FOWN^2_{it} + b_8FOWN^3_{it} + b_9CEO_{it} + b_{10}EDUC_{it} + b_{11}AGE_{it} + b_{12}GENDER_{it} + b_{13}GEN_{it} + b_{14}DEBT + b_{15}FAGE_{it} + b_{16}LNFSIZE_{it} + b_{17}CP_{it} + b_{18}IP_{it} + b_{19}TS_{it} + b_{20}PROP_{it} + b_{21}OTHERS_{it} + \alpha_i + \lambda_t + u_{it} \quad \textbf{(Equation 4.2)}$$

Notes: FPERF=Firm performance, BSIZE=Board size, BINED=Board independence, BDEG=Directors with degree qualification, BEXP=Directors with professional qualification, LSHIP=Leadership structure, FOWN=Family managerial ownership, $FOWN^2$=Family managerial ownership^2, $FOWN^3$=Family managerial ownership^3, CEO=Family CEO, EDUC=CEO education level, AGE=CEO age, GENDER= CEO gender, GEN=Family generation level, DEBT=Company's debt, FAGE=Firm age, LNFSIZE=Firm size, CP=Consumer product, IP= industrial product, TS=Trading services, PROP=Properties, OTHERS=Plantation, construction, infrastructure projects, technology, hotel and mining.

Equation 4.2 tests for family-controlled companies sample only. Equation 4.2 is an extension of previous works (Mishra et al., 2001; Anderson & Reeb, 2003; Villalonga & Amit, 2006) on corporate governance and succession (Lusssier & Sonfield, 2004; Lane et al., 2006; Castilo & Wakefield, 2006; Cucculelli & Micucci, 2008). Equation 4.2 is developed to test the hypotheses H_{2a}, H_{3a}, H_{4a}, H_{5a}, H_{6a}, H_{7a}, H_8, H_9, H_{10}, H_{11} and H_{12}.

Equation 3 (Non-family controlled companies) is as follows:

$$FPERF = b_0 + b_1BSIZE_{it} + b_2BINED_{it} + b_3BDEG_{it} + b_4BEXP_{it} + b_5LSHIP_{it} + b_6NFOWN_{it} + b_7NFOWN^2_{it} + b_8NFOWN^3_{it} + b_9DEBT_{it} + b_{10}FAGE_{it} + b_{11}LNFSIZE_{it} + b_{12}IP_{it} + b_{13}TS_{it} + b_{14}PROP_{it} + b_{15}OTHERS_{it} + \alpha_i + \lambda_t + u_{it} \quad \textbf{(Equation 4.3)}$$

Notes: FPERF=Firm performance, BSIZE=Board size, BINED=Board independence, BDEG=Directors with degree qualification, BEXP=Directors with professional qualification, LSHIP=Leadership structure, NFOWN=Non-family managerial ownership, $NFOWN^2$=Non-family managerial ownership^2, $NFOWN^3$=Non-family managerial ownership^3, DEBT=Company's debt, FAGE=Firm age, LNFSIZE=Firm size, CP=Consumer product, IP= industrial product, TS=Trading services, PROP=Properties, OTHERS=Plantation, construction, infrastructure projects, technology, hotel and mining.

Equation 4.3 uses the sample of non-family controlled companies. Equation 4.3 tests the corporate governance mechanisms (board and ownership) with firm performance (accrual and cash flow based). Equation 4.3 is developed to test the hypotheses H_{2b}, H_{3b}, H_{4b}, H_{5b}, H_{6b} and H_{7b}.

4.5.1 Further tests

In addition, this study also conducted other tests on hypothesised variables in different groupings and measurements to ensure the robustness of the research. Board independence was also measured using an alternative method, that is, the % of NED and % of ED on the board to total board members, professional directors by testing the % of independent professionals to total board members, director's education background by excluding the founders and examine on firm size and industry effects. Ownership was also tested by adding up the managerial ownership for the EDs and NEDs to identify any difference in the results and consider the substantial shareholders in non-family ownership. In terms of succession attributes, further analysis on family CEO and gender with family generation to detect any effect on the firm value.

4.6 Variable definition and measurement

The data collected for this study consists of three categories: dependent variable, independent variables and control variables.

4.6.1 Dependent variable

Firm performance is the dependent variable tested in this study. The performance indicators in this study are Tobin's Q (Q), Return on Assets (ROA), Return on Equity (ROE), Earnings per Share (EPS) and Operating Cash Flow (OCF). However, the performance indicators mentioned above are tested one at a time in order to overcome the inherent limitations in any single financial measure. Based on suggestions in previous research, multiple measures produce a more accurate description of performance (Rechner & Dalton, 1991). According to Dalton and Kesner (1985) "the literature has strongly endorsed relying on multiple performance measure . . .". Cochran and Wood (1984) argued that although there is no consensus as to what constitutes the proper measure of financial performance, such measures fall into two broad categories: investor returns and accounting returns (pp. 752-753).

The performance indicators in this study are divided into two groups. These are accrual based and cash flow based. For accrual based, Q, ROA, ROE and EPS are the variables. While for cash flow based, the variable is OCF. Q is defined as the market value of ordinary shares plus the book value of the preferred shares and debt divided by book

value of total assets (Yeh et al., 2001; Wiwattanakantang, 2001; Chu & Cheah, 2004; Chen, et al., 2005; Maury, 2006; Villalonga & Amit, 2006; Martinez et al., 2007; Ibrahim et al., 2008). In Malaysia, the share is a single class of shares, so the market value of ordinary shares is the share price at fiscal year-end times the number of ordinary shares outstanding.

ROA is defined as net income divided by book value of total assets (Yeh et al., 2001; Anderson & Reeb, 2003; Chu & Cheah, 2004; Ng, 2005; Chen et al., 2005; Martinez et al., 2006; Maury, 2006; Miller & Miller, 2006; Abdul Samad et al., 2008). ROE is defined as net income divided by shareholders' equity (Anderson & Reeb, 2003; Ng, 2005; Martinez et al., 2006; Maury, 2006; Miler & Breton-Miller, 2006; Abdul Samad et al., 2008) and EPS is the published earnings for ordinary divided by the average number of shares on issue during the period (Mat Nor et al., 1999). Sun & Tong (2003) claims that the accounting performance measure is a better performance measure than share market based measures. This is because the share prices are less likely to reflect all available information when the share market shows inefficiency. Nevertheless, the accounting performance measure is more directly related to its financial survivability than its share market value and allows the evaluation of performance of publicly traded companies.

OCF is defined as the ratio of cash flow from operating activities to total assets. OCF is measured by using the cash-flow method (Bowen, Burgstahler & Daley, 1986; Ali & Pope, 1995; Abdul Rahman & Limmack, 2004; Mohd Ali et al., 2008; Wan-Hussin,

2009). OCF is the operating profit before tax and extraordinary items, adjusted for depreciation and goodwill and changes in working capital (that is changes in stocks, trade debtors and prepayments and changes in creditors and accruals). A study by Chang and Shin (2007) argued that cash flow based is relatively free from earnings management aimed at reducing or inflating net income. Firm performance based on operating cash flow is relatively free from managerial manipulation. Dechow (1994) points out that: many financial analysts regard operating cash flow as a better gauge of corporate financial performance than net income, since it is less subject to distortion from differing accounting practices (1994, p. 5).

4.6.2 Independent variables

The independent variables in this study are divided into three main parts: family-controlled companies, corporate governance mechanisms (board and ownership) and succession planning.

4.6.2.1 Family-controlled company

There are many definitions of family-controlled company used in the literatures (La Porta et al., 1999; Floren, 1998; James, 1999; Yeh et al., 2001; Anderson & Reeb, 2003; Lee, 2004, 2006; Chrisman et al., 2005; Barontini & Caprio, 2006; Maury, 2006; Miller & Breton-Miller, 2006; Villalonga & Amit, 2006; Martinez et al., 2007; Chen et al., 2008; Abdul Samad et al., 2008, Andres, 2008; Ibrahim et al., 2009; Chu, 2009; Wan-Hussin,

2009). In this study, the definition of family-controlled company (FCF) is consistent with previous studies (La Porta et al., 1999; Anderson & Reeb, 2003; Villalonga & Amit, 2006; Chen et al., 2008) with some modification to reflect the Malaysian family business scenario. In this study, a family-controlled company must fulfil three requirements, these are: (1) Founder is the CEO or successor of CEO that is related by blood or marriage, (2) with at least two family members in its management, and (3) family directors have ownership (direct and indirect shareholdings) of a minimum of 20% in the company.

In selecting family-controlled companies, the researcher read the *Directors Profile* section in the annual report to identify the director's position on the board (whether the director is the executive chairman, non-executive chairman, executive director, non-executive director, independent non-executive director or alternate director). Through reading the *Directors Profile* section, the researcher was able to identify whether the director is a family director or not. Effective from January 2001, the Code (2001) requires companies to disclose relationships between its directors and managers and among its directors[17]. If all the three criteria were met, the company was selected as a family-controlled company. If any of the criteria was not meet, then the company was rejected. A non-family controlled company is defined as a company where the directors that sit on the board do not have any family relationship with the company/management. A family-

[17] An amendment to the BM listing rules 9.19 (25) has lowered the percentage of shareholding that requires mandatory disclosure of the identity of a substantial shareholder from 5 percent to 2 percent. In 1998, the Securities was amended to impose mandatory disclosure of the beneficial owner's identity of a nominee account. Therefore, in the sample businesses, the top 20 largest shareholders are listed and the relationships among individuals and businesses who are shareholders are also disclosed.

controlled company (FC) was coded using a dummy variable (0, 1). Family-controlled company was coded as 1 and non-family controlled company was coded as 0.

4.6.2.2 Board size

To calculate for the board size, the researcher reads the list of directors' names sitting on the board. The number of directors was calculated and entered into the worksheet. For the appointment of a new director onto the board, if the director was appointed before the end of June of that financial year, the director is included into the counting, however if the director was appointed from July onwards, the name was discarded. Board size (BSIZE) is the total number of directors on the board. This measurement has been used by previous studies in Malaysia by Abdullah (2001), Abdul Samad et al. (2008), Ishak (2004), Sulong and Mat Nor (2009), Amran and Che-Ahmad (2009), Zainal Abidin et al. (2009) and Chen and Nowland (2010).

4.6.2.3 Board independence

First, the researcher identified all the directors sitting on the board of directors. Data was keyed into the worksheet according to the position (executive director, non-executive director, independent non-executive director, alternate directors, executive chairman, non-executive chairman or managing director/chairman) from the *Directors' Profile* section of the annual report. Board independence was calculated as the percentage of independent non-executive directors (INEDs) divided by the total board of directors. The

measurement has been applied in previous studies in Malaysia (Abdullah, 2001; MSWG-NUBS, 2007; Samad et al., 2008; Meng, 2009; Amran & Che-Ahmad, 2009; Ameer et al., 2010; Ponnu & Karthigeyan, 2010).

4.6.2.4 Director's education background

Director's education (BDEG) is to measure the director's level of education. A director may have secondary, diploma, degree, master or above. To calculate for director's education (BDEG) the percentage of directors' with a degree and above was divided by the total number of directors. Until this study was conducted, there was lack of study that considers looking on director's education with performance done in Malaysia. Most studies were done in oveaseas (Schultz, 1971; Sebora & Wakefield, 1998; Hillman et al., 2000; Chen et al., 2005; Switzer & Huang, 2007).

4.6.2.5 Director's expertise

The profile of each director was read carefully to identify whether the director holds any professional title or not. Usually, professional directors include professional titles with the name, for example, in accounting (CA, CMA, CPA, CCSA, CCA or CPE), engineering (Ir), finance (CFP), information technology (ISP), business (CFA) and law (CLP).

For instance, in the Hup Seng Consolidated Berhad 2007 annual report, pages 13, 14 and 15 disclose that three of the directors have professional qualifications. Mr Lee Wee Yong, Deputy Managing Director is a Chartered Accountant and member of the Malaysian Institute of Accountants and New Zealand Institute of Chartered Accountants. While Soon Seong Keat who is an Executive Director is a Chartered Accountant of the Malaysian Institute of Accountants and Malaysian Institute of Certified Public Accountants. Lau Teong Jin is one of the Independent Non-Executive Directors in the company. He is a lawyer by practiced. The measurement for director with professional qualification (BEXP) is the percentage of directors with professional qualification divided by the total number of directors on the board.

4.6.2.6 Leadership structure

To determine whether the company practises separate or duality leadership, the researcher first read the *Directors Profile* section to search for the Chairman and the Chief Executive Officer/Managing Director of the company. A company is identified as having separate leadership when the Chairman and the Chief Executive Officer/ Managing Director is filled by two different persons. While duality leadership is when the Chairman and the CEO/MD is being held by the same individual. The information on the Chairman and CEO/MD was entered into the worksheet. Next, dummy variables were assigned. The company was coded as 1, if the Chairman and the CEO are two separate individuals, and if the Chairman and CEO position is held by one person, it was coded as 0.

4.6.2.7 Managerial ownership

In calculating the directors' ownership, the names of directors with shareholdings were retrieved from the annual report. Then the directors' names were listed down in the worksheet. Referring to the *Directors Profile*, each director was identified as to whether they are a family director or not, and the number of shareholdings the director holds. Directors without any ties to the largest family shareholder were classified as non-family directors. A number of different roles (executive director, non-executive director, independent non-executive director, retired executive, Chief Executive Officer/ Managing Director, Chairman, alternate director, major shareholder, family director and company founder) were considered in the examination of ownership.

In calculating and totalling the managerial ownership interest, this step was done carefully to avoid the problem of double counting, especially in the situation where the directors and their next-of-kin also have ownership interests in the company or other companies. In this study, the researcher defines managerial ownership as the proportion of shares (direct and indirect shareholdings) held by the executive directors over the total number of shares issued. This measurement has been used by previous studies in overseas (Demsetz, 1983; Fama & Jensen, 1983; Demsetz & Lehn, 1985; Holderness et al., 1999; Mandaci & Gumus, 2010; Fahlenbrach & Stulz, 2010) and locally (Mat Nor et al., 1999; Mohd Sehat & Abdul Rahman, 2005; Mat Nor & Sulong, 2007; Mohd Ali et al., 2008; Ali Ahmed, 2009; Mahmud et al., 2010) to measure the managerial ownership.

The directors and their respective shareholdings were identified from the *Analysis of Shareholding* and *Directors Profile* in the annual report. Data from the *Bursa Malaysia Database* was also used to complement the information gathered from the annual report. For each director, shareholdings were further categorized into direct and indirect holdings. Direct ownership is an individual (or a family) who holds shares in his or her own name. Indirect ownership is traced through the controlling owner of the company (La Porta et al., 1999). Indirect holdings refer to the directors' holdings in the company through deemed interest by virtue of the director's: (1) substantial shareholdings in another company that had a direct ownership interest in the company, and/or (2) next-of-kin's (spouse, parents, children, or relatives) direct ownership interest in the company.

This study also measures a non-linear range of the managerial ownership (alignment-entrenchment-alignment) with firm performance. There are studies conducted in overseas (Morck et al., 1988; Stulz, 1988; McConnell & Servaes, 1990; Hermalin & Weisbach, 1991; Short & Keasey, 1999) and local studies (Mat Nor et al., 1999; Mohd Sehat & Abdul Rahman, 2005; Sulong & Mat Nor, 2009) that measure the non-linear relationship between managerial ownership and firm performance. It is expect the same relationships also exist in Malaysia although the behaviour for family and non-family companies might be different.

4.6.2.8 Family managerial ownership

The names of family directors were identified through the *Directors Profile*, *Analysis of Shareholding* section and *Bursa Malaysia Database*. Then, the name and the shareholdings (direct and indirect) were recorded in the worksheet. For each director, the direct and indirect shareholdings were totalled up to derive the shareholdings for each family director. Family ownership (FOWN) is measured by the % of shares owned by family executives divided by the total number of shares issued. This measurement has been used by previous researchers (Morck et al., 2000; Schulze et al., 2001; Yeh et al, 2001; Anderson et al., 2003; Ng, 2005; Chen et al., 2005; Andres, 2008; Achmad et al., 2009; Chu, 2009; Lin & Chang, 2010).

Past studies (Yeh et al., 2001; Anderson et al., 2003; Ng, 2005; Chen et al., 2005) have examined the range in family managerial ownership and firm performance. They have found mixed results whereby in the US, family ownership enhance firm performance (Anderson et al., 2003). But, in Taiwan and Hong Kong, there is a non-linear relationship (entrenchment-alignment-entrenchment) pattern of ownership (Yeh et al., 2001; Ng, 2005), while the other study in Hong Kong found there is no relationship between family ownership and firm performance (Chen et al., 2005). Thus, this study also measures the range of family managerial ownership (entrenchment-alignment-entrenchment) with firm performance based on past studies done.

4.6.2.9 Non-family managerial ownership

The same steps as were used for detecting family managerial ownership were repeated. However, this time the focus is to look for non-family directors names through the *Directors Profile*, *Analysis of Shareholding* section and the *Bursa Malaysia Database*. Next, the name and the shareholdings (direct and indirect) were recorded in the worksheet. For each director, the direct and indirect shareholdings were totalled up to derive the shareholdings for each non-family director. Non-family managerial ownership (NFOWN) was measured by the % of shares owned by the non-family executives divided by the total number of shares issued.

4.6.2.10 Family CEO or professional CEO

With reference to the *Directors Profile* section, the researcher looked for the company CEO, whether the company appointed a family member as the CEO or the CEO is an outsider/ professional. The details were recorded in the worksheet. Family or professional CEO (CEO) was coded using dummy variables. Dummy '1' was coded if the CEO was a family member, otherwise '0' for outsider/ professional CEO.

4.6.2.11 CEO education background

Information concerning the CEO education level was gathered from the *Directors Profile* section. A CEO may have only studied in primary or secondary school. However, there are CEOs that have a diploma, degree, master, doctor of philosophy or professional certificates. All the information was entered into the worksheet. In order to code for CEO education (EDUC), CEOs that attain degree level and above were coded as '1' and '0' otherwise.

4.6.2.12 CEO age

Age of the CEO was recorded after the researcher read the *Directors Profile* section. The age of the CEO was split into two groups: CEO aged less than 40 years old and CEO aged above 40 years old. CEO age was coded using the dummy variables. If the CEO aged below 40 years old, it was coded as '0' and '1' for CEOs aged 40 years old and above.

4.6.2.13 Gender

In managing the company, the CEO gender was identified as being male or female. The information on CEO gender was gathered in the *Directors Profile* section. CEO gender (GENDER) was coded as '1' if the CEO is male and '0' if female.

4.6.2.14 Family generation

Family generation is defined as the number of family generation involved since the establishment of the company. The information on generation was gathered from business magazines, newspapers, books and annual reports. In this study, Malaysian Business magazines and some special issues on family companies magazines were used to search for family generation. In terms of newspapers, the researcher referred to all available newspapers, however, most of the information was derived from The Star (StarBiz column) or the Straits Times (Biznews column). In terms of books, the researcher searched for books that discussed family companies in Malaysia. For instance, the family generation in Genting Group was identified based on the narration written in the column "Lim passed batton to second son in 2003" (The Star, 24 October 2007). The late Tan Sri Lim Goh Tong had passed the baton to his second son Tan Sri Lim Kok Thay in December 2003 to head the Genting Group. Assisting Kok Thay was his nephew, Justin Leong that also sits in the management team. Thus, from this article, it was clearly stated that Tan Sri Lim Goh Tong was the founder and had passed it to his second son Tan Sri Lim Kok Thay (the successor) and now the family business is in the second generation. Similar process of data collection was also done on other companies in the dataset.

For the annual report, the information on family generation is not directly mentioned in the *Directors Profile* section, however, it can be determined from publicly available information whether the company is run by the founder, son of the founder or relatives.

For example, the information on family generation is obtained by reading line by line on the information in the "Director's Profile". In the case of MK Land Bhd, this family company is in the first generation whereby Tan Sri Datuk Haji Mustapha Kamal bin Haji Abu Bakar was the founder and major shareholder of the company. His son, Tuan Haji Ahmad Khalif bin Tan Sri Datuk Haji Mustapha Kamal and two daughters, Puan Hajjah Felina binti Tan Sri Datuk Haji Mustapha Kamal and Puan Hajjah Fazwina binti Tan Sri Datuk Haji Mustapha Kamal have helped the father to manage the family company by involving in the business operation. In this way, the generation was determined for this study. Generation was coded using a dummy variable. It was coded as '1' if the family-controlled company was in the 1st generation (founder) and '0' for 2nd generation and above (successor).

Table 4.4

The measurement for dependent and hypothesised variables and expected signs

Acronym	Variable	Measurement	Expected sign (+/-)
Dependent (PERF):			
Q	Tobin's Q	Market value of ordinary shares plus book value of preferred shares and debt divided by book value of total assets.	n.a.
ROA	Return on assets	Net income divided by book value of total assets.	n.a.
ROE	Return on equity	Net income divided by shareholders' equity	n.a.
EPS	Earnings per share	The published earnings for ordinary divided by the average number of shares on issue during the period.	n.a.
OCF	Operating cash flow	Ratio of cash flow from operating activities to total assets. OCF is the operating profit before tax and extraordinary items, adjusted for depreciation and goodwill and changes in working capital (that is changes in stocks, trade debtors and prepayments and changes in creditors and accruals).	n.a.
Hypotheses:			
FCF (H_1)	Family-controlled company	Family-controlled company is defined as (1) Founder is the CEO	+

Acronym	Variable	Measurement	Expected sign (+/-)
		or successor is CEO related by blood or marriage, (2) with at least two family members in the management, AND (3) family directors have ownership (direct and indirect shareholdings) of minimum of 20% in the company. It is coded as 1 if it is family-controlled company, 0 otherwise.	
BSIZE (H_2)	Board size	Total number of directors sitting on the board.	+/-
BSIZEfam (H_{2a})	Board size for family-controlled companies	Total number of directors sitting on the board, for family-controlled companies.	+
BSIZEnfam (H_{2b})	Board size for non-family controlled companies	Total number of directors sitting on the board, for non-family controlled companies.	+
BINED (H_3)	Board independence	% of independent non-executive directors divided by total directors.	+/-
BINEDnfam (H_{3b})	Board independence for non-family controlled companies	% of independent non-executive directors divided by total directors, for non-family controlled companies.	+

Acronym	Variable	Measurement	Expected sign (+/-)
BDEG (H_4)	Director education background	% of directors' with degree and above divided by total directors.	+
BDEGfam (H_{4a})	Director education background for family-controlled companies	% of directors' with degree and above divided by total directors, for family-controlled companies.	+
BDEGnfam (H_{4b})	Director education background for non-family controlled companies	% of directors' with degree and above divided by total directors, for non-family controlled companies.	+
BEXP (H_5)	Director with professional qualification	Professional qualification is define as an individual that hold the professional title or license such as for accounting (CA, CMA, CPA, CCSA, CCA or CPE), engineering (Ir), finance (CFP), information technology (ISP), business (CFA), law (CLP) and others. % of directors with professional qualification divided by total directors.	+
BEXPfam (H_{5a})	Director with professional qualification for family-controlled companies	% of directors with professional qualification divided by total directors, for family-controlled companies.	+
BEXPnfam	Director with	% of directors with professional	+

Acronym	Variable	Measurement	Expected sign (+/-)
(H_{5b})	professional qualification for non-family controlled companies	qualification divided by total directors, for non-family controlled companies.	
LSHIP (H_6)	Leadership structure	The type of leadership that a firm practices, whether separate leadership or duality leadership. It is coded as 1, if the firm practises separate leadership, 0 for duality.	+/-
LSHIPfam (H_{6a})	Leadership structure for family-controlled companies	The type of leadership that a firm practices, whether separate leadership or duality leadership, for family-controlled companies.	-
LSHIPnfam (H_{6b})	Leadership structure for non-family controlled companies	The type of leadership that a firm practices, whether separate leadership or duality leadership, for non-family controlled companies.	+
MOWN (H_7)	Managerial ownership	% of shares owned by executives directors divided by total number of shares issued.	+
$MOWN^2$	Managerial $ownership^2$	[% of shares owned by executives directors divided by total number of shares issued] to the power of two.	-
$MOWN^3$	Managerial $ownership^3$	[% of shares owned by executives directors divided by total number of shares issued] to the power of three.	+

Acronym	Variable	Measurement	Expected sign (+/-)
FOWN (H_{7a})	Family managerial ownership	% of shares owned by family executives divided by total number of shares issued.	-
$FOWN^2$	Family managerial $ownership^2$	[% of shares owned by family executives divided by total number of shares issued] to the power of two.	+
$FOWN^3$	Family managerial $ownership^3$	[% of shares owned by family executives divided by total number of shares issued] to the power of three.	-
NFOWN (H_{7b})	Non-family managerial ownership	% of shares owned by non-family executives divided by total number of shares issued.	+
$NFOWN^2$	Non-family managerial $ownership^2$	[% of shares owned by non-family executives divided by total number of shares issued] to the power of two.	-
$NFOWN^3$	Non-family managerial $ownership^2$	[% of shares owned by non-family executives divided by total number of shares issued] to the power of three.	+

Acronym	Variable	Measurement	Expected sign (+/-)
CEO (H_8)	Family or professional CEO	The CEO is an individual that manage the company. It is coded as 1 if the CEO is from family member, 0 if he/she is an outsider/professional.	+
EDUC (H_9)	CEO education background	Education background of the CEO as at the time he/she hold the CEO position. It is coded as 1 if he/she has a degree or higher qualification, 0 otherwise.	+
CEO (H_8)	Family or professional CEO	The CEO is an individual that manage the company. It is coded as 1 if the CEO is from family member, 0 if he/she is an outsider/professional.	+
EDUC (H_9)	CEO education background	Education background of the CEO as at the time he/she hold the CEO position. It is coded as 1 if he/she has a degree or higher qualification, 0 otherwise.	+
AGE (H_{10})	CEO age	The CEO age at time he/she hold the position.	+/-
GENDER (H_{11})	CEO gender	The company is headed by male or female CEO.	+/-

Acronym	Variable	Measurement	Expected sign (+/-)
		It is coded as 1 if male, 0 for female.	
GEN (H_{12})	Family generation	The number of family generation involvement in the company. It coded as 1 if the family company is in the 1st generation (founder), 0 for 2nd generation and above (successor).	+

4.6.3 Controlled variables

4.6.3.1 Debt

Debt may reduce agency costs by reducing the cash flows available for expropriation of negative net present value projects (Harris & Raviv, 1991; Jensen, 1986). However, managerial insiders are reluctant to use the optimal amount of debt financing for the organization because of the additional bankruptcy risk associated with the higher level of debt engendered (Fosberg, 2004). Therefore, managers will not issue the optimal amount of debt without pressure from a disciplining force (Jensen, 1986).

Further, due to asymmetric information and signalling problems in obtaining the external funds, companies finance their firms through debt over equity (Myers, 1984; Myers & Majluf, 1984). Highly profitable companies often use their earnings to pay debt and, as a result, the companies

are less leveraged than their less profitable counterparts (Titman & Wessels, 1988). Managers also prefer to fund new investment with retained earnings rather than debt, but prefer debt to equity financing (Hovakimian, Opler & Titman, 2001). Companies appear to make their choice of financing instrument using long-term and short-term debt (Marsh, 1982). Company debt provides a measure of monitoring which reduces the need for additional monitoring provided by concentrated ownership (Welch, 2003).

In family companies, studies note that first generation firms had the highest use of the equity versus debt financing (Sonfield & Lussier, 2004). Chen et al., (2008) found that family firms are less likely to acquire external capital from the debt or equity market. In this study debt (DEBT) is measured as the book value of long-term debt divided by total assets.

4.6.3.2 Firm age

Young firms will have better outcomes than old firms. However, it appears that the effect of age on performance is particularly significant for late movers. This result can be related to the fact that entering late in a market may prevent the firm from getting a competitive advantage that previous entrants may have created and defended. Consequently, age is even more detrimental to performance when a firm delays its entry into a business (Durand & Coeurderoy, 2001).

Strong arguments support the view that older firms are more likely than younger firms to achieve a lower performance on average (Dunne & Hughes, 1994). Older firms suffer from ossification

of their routines, non-learning processes, blindness, and conservatism, which cause poor performance and decline (Boeker 1997; Szulanski 1996).

Firm age is an important determinant of firm growth, the variability of firm growth and the probability of firm dissolution (Evans, 1987a). As firm age increases, the managers learn more about their abilities over time (Evans, 1987b). Studies have shown that young firms, for a given size, grow faster than old firms (Dunne & Hughes, 1994). Smaller firms are vulnerable and firm age is expected to survive "only 5-10 years" (Ward & Mendoza, 1996). In this study, firm age (FAGE) is measured as the number of years since the company was incorporated.

4.6.3.3 Firm size

Some family firms do not plans to grow in size. As a result, family firms "only grow at a pace consistent with meeting the advancement needs of organizational members in the family system" (Daily & Dollinger, 1993, p.81). Furthermore, firm size cannot expand if a family management team is reluctant to raise external funds because they fear losing family control (Church, 1993).

However, this is not necessarily true. In fact, some of the world's largest companies (e.g., Cargill, M&M Mars) are family-controlled (Litz, 1995). Family businesses have greater opportunity to train and develop top management and more complex succession plans (Helmich, 1977), more training programmes and complex succession plans (Trow, 1961), and larger resources to engage external consultants for advice on facilitating the succession planning

process (Chaganti et al., 1991). Thus, larger family businesses may have more qualified and experienced candidates in place for possible succession (Harveston et al., 1997). Measurement of firm size (LNFSIZE) was calculated by dividing the natural log of the book value with total assets.

4.6.3.4 Industry type

In addition, industry influences the performance outcomes. However, the relationships are significantly mediated by the levels of debt that are sensitive to the sectors (Tam & Tan, 2007). A study in Taiwan shows that large-block-holders do not generally control Taiwan firms in the high-tech industries. High-tech firms have significantly higher firm values than other industries no matter what types of large-block ownership they have (Chen, 2006). Local studies found that some industries are better than others. Plantation/mining sectors under-perform, but the trading sector performs relatively better than their counterparts in the industrial sector (Haniffa & Hudaib, 2006). In this study, industries are trading services (TS), consumer products (CP), industrial products (IP), properties (PROP), plantation, construction, infrastructure projects, technology, hotels, and mining. This was then split into five groups TS, CP, IP, PROP and OTHERS. Plantation, construction, infrastructure projects, technology, hotels, and mining are grouped as OTHERS because these industries are small in number.

Table 4.5

The measurement for control variables

Controlled:		
DEBT	Debt	The book value of long-term debt divided by total assets.
FAGE	Firm age	Number of years since incorporated.
LNFSIZE	Firm size	Natural log of the book value of total assets.
CP	Consumer products	Consumer product is coded as 1, others are 0.
IP	Industrial products	Industrial product is coded as 1, others are 0.
TS	Trading services	Trading services is coded as 1, others are 0.
PROP	Properties	Properties is coded as 1, others are 0.
OTHERS	Others	Plantation, construction, infrastructure projects, technology, hotel and mining is coded as 1, others are 0.

4.7 Conclusion

This study employs the secondary data approach to examine the relationship between family-controlled companies, corporate governance mechanisms and family succession with firm

performance. The dependent variable firm performance was measured using the accrual and cash-flow based. The independent variables were categorised into family-controlled companies, board, ownership structure and succession attributes.

The sample size for this study was 420 companies on the Main and Second Board of Bursa Malaysia from 2003 to 2007. This study adopted panel data regressions to test the conceptual models. Data was checked for outliers, normality and linearity before analysis was carried out. The assumptions underlying, such as multicollinearity, heteroscedasticity and autocorrelation, were also checked before the models were analysed. The models were analysed using the panel GLS method.

CHAPTER 5

RESULTS AND DISCUSSION

5.1 Overview of the chapter

This chapter presents some empirical evidence concerning the relationship between family-controlled companies, corporate governance mechanisms and family succession with firm performance. The discussion in this chapter is divided into seven sections. Section 5.2 presents the results of the outliers. Then Section 5.3 discusses the descriptive data. Next, Section 5.4 focuses on univariate analyses. Section 5.5 reports the results of the main Equation 4.1 (all companies), Equation 4.2 (family-controlled companies) and Equation 4.3 (non-family controlled companies). Further tests were carried out to ensure the consistency and robustness of the analysis, which are discussed in Section 5.6. Finally, Section 5.7 concludes the chapter.

5.2 Results of outliers

The sample in this study was 420 PLCs (2100 observations for five year). This study used balanced panel data as it is a more sensitive measurement of the changes that could take place between points in time (Cavana et al., 2001). Further, the results produced are more robust, consistent, and more stable to make a generalisation to the population so that it is more representative and meaningful.

Table 5.1

Analysis of the sample

	Number of companies
Total observations in year 2003 (as discussed in Chapter 4)	420
Total observations in the sample for 2003 to 2007	2100
Companies discarded (outliers)	(5)
Final sample	2095

The raw data was further screened by examining the basic statistics for the frequency distribution of data. Descriptive statistics including mean, standard deviation, median, minimum and maximum values of the variables were scrutinised to detect any mistakes or missing values in the data entry. Scatter plots and a stem and leaf plot were run to identify most extreme high and low values. From the graphs, five extreme outliers were identified. To confirm the outliers, the Cook Distance test was conducted in this study using STATA. The five observations show Cook's distance values of more than 0.01 (4/1200). Based on testings done above (Cook Distance test, scatter plots and stem and leaf plot), the five outliers were considered to be extreme outliers and been discarded to avoid distortion in the results (Hair et al., 2006). The final dataset was 2,095 observations (as presented in Table 5.1).

5.3 Descriptive data

The following tables discussed in the next sections are related to three categories: board governance, ownership structure and succession attributes.

Table 5.2

Frequency and percent of family and non-family controlled companies

	Frequency	**Percent**
Family-controlled	915	43.66
Non-family controlled	1180	56.34
Total	**2095**	**100.0**

Based on Table 5.2, the sample size for family-controlled companies represents 43.66% (915 companies) on Bursa Malaysia, while non-family controlled companies total 1,180 companies with 56.34% of the total sample. The distribution of the sample is balanced between the family-controlled companies and non-family controlled companies. Further, the findings from this study are similar to previous works whereby the family companies control almost 60% of PLCs (World Bank, 1999; Claesssens et al., 2000; Soederberg, 2003).

Table 5.3

Frequency and percent of family and non-family controlled companies by type of board

	NFC		FC	
	Frequency	**Percent**	**Frequency**	**Percent**
Main board	885	57.06	666	42.94
Second board	295	54.23	249	45.77
Total	**1180**	**100.0**	**915**	**100.0**

Note: NFC=Non-family controlled companies, FC=Family-controlled companies.

The results in Table 5.3 show the frequencies of family-controlled and non-family controlled companies when companies are split into main board and second board. The proportion of family-controlled companies on the main board is 666 (42.94%), and second board companies total 249 (45.77%). For the non-family controlled companies, the companies on the main board include 885 companies (57.06%) and 295 (54.23%) for the second board.

Table 5.4

Frequency and percent of family and non-family controlled companies by industry

	NFC		FC	
	Frequency	**Percent**	**Frequency**	**Percent**
Consumer product	185	15.7	186	20.3
Industrial product	365	30.9	301	32.9
Plantation	80	6.8	66	7.2
Trading Services	295	25.0	107	11.7
Construction	70	5.9	95	10.4
Infrastructure projects	20	1.7	5	0.5
Technology	35	3.0	20	2.2
Hotels	15	1.3	10	1.1
Properties	115	9.7	125	13.7
Total	**1180**	**100.0**	**915**	**100.0**

Note: NFC=Non-family controlled companies, FC=Family-controlled companies.

Table 5.4 describes the statistics on non-family controlled and family-controlled companies with relation to the industry as defined by Bursa Malaysia. The highest sector that non-family controlled companies are involved in is industrial product (30.9%), followed by trading services (25.0%), consumer product (15.7%) and properties (9.7%), respectively. Most family-controlled companies are engaged in industrial product (32.9%), consumer product (20.3%), properties (13.7%) and construction (10.4%).

5.3.1 Board governance

Table 5.5

Frequency and percent) by board size

	NFC		FC	
	Frequency	**Percent**	**Frequency**	**Percent**
Less than 6	165	14.0	183	20.0
6 to 8	625	53.0	357	39.0
More than 8	390	33.0	375	41.0
Total	**1180**	**100.0**	**915**	**100.0**

Note: NFC=Non-family controlled companies, FC=Family-controlled companies.

In Table 5.5, board size is divided into three categories. It was found that the majority of non-family companies have 6 to 8 members with 53% of the sample, followed by 33% non-family companies with more than 8 persons and only 14% of companies have a board size of less than 6 members. In contrast, family-controlled companies favour large boards with more than 8 directors, which represent 41% of the sample, followed by 39% with 6 to 8 members and only 20% have small boards (less than 6 people). The findings for family-controlled companies that favour large board size (more than 8 members) are consistent with past works done by Goodstein et al. (1994), Haniffa & Cooke (2005), and Sulong and Mat Noor (2009). Large boards are claimed to be effective in oversight duties relative to small boards and are capable of monitoring the actions of top management (Zahra & Pearce, 1989). However, the findings from this study contradict those of Mishra et al. (2001) and Chen et al. (2008). Non-family controlled companies have a board size of 6 to 8 members, which was claimed to be an ideal board size (Jensen, 1993). Further, this finding is in line with previous local studies (PricewaterhouseCoopers, 1998; Abdullah, 2001; Amran & Che-Ahmad, 2009).

Table 5.6

Frequency and percent by board composition

		NFC		FC	
	Size	**Frequency**	**%**	**Frequency**	**%**
EC	1	410	34.7	515	56.3
NEC	1	770	65.3	400	34.4
ED	1 to 4	1120	95.0	751	82.0
	5 to 8	60	5.0	164	18.9
	More than 8	0.0	0.0	0.0	0.0
NED	1 to 4	1100	93.2	894	98.0
	5 to 8	75	6.4	21	2.0
	More than 8	5	0.4	0.0	0.0
INED	1 to 4	1080	91.5	866	95.0
	5 to 8	100	8.5	49	5.0
	More than 8	0.0	0.0	0.0	0.0

		NFC		FC	
ALT	1 to 4	1175	99.9	915	100.0
	5 to 8	5	0.1	0.0	0.0

Note: NFC=Non-family controlled companies, FC=Family-controlled companies, EC=Executive chairman, NEC=Non-executive chairman, ED=Executive director, NED=Non-executive director, INED=Independent non-executive director, ALT=Alternate director.

Table 5.6 illustrates the composition of the board. The results show that family-controlled companies have a higher number of Executive Chairmen (56.3%) compared to non-family controlled companies (34.7%). For the Non-Executive Chairman's post, the results show that non-family controlled companies' favour appointing the NEC to head the board (65.3%), while 34.4% of family-controlled companies appoint the NEC to be on the board. In terms of the position of Executive Director, on average, family (82%) and non-family controlled companies (95%) have executive directors' within 1 to 4 executive directors. Independent non-executive directors for both family (95%) and non-family controlled companies (91.5%) appoint at least 1 and a maximum of 4 independent directors to be on the board. These results show that family and non-family companies do comply with the Code (2001) of having at least 1/3 of the board as independent non-executive directors. Both family and non-family companies do consider Alternate directors, but they are very small in number, with at least one and a maximum of four directors for both family and non-family controlled companies. Overall, in terms of board composition, family and non-family controlled companies have a balanced board composition. In

addition, companies traded on Bursa Malaysia comply with the Code (2001) on the requirement of independent non-executive directors.

Table 5.7

Frequency and percent by directors with degree holder

	NFC		FC	
	Frequency	**Percent**	**Frequency**	**Percent**
Less than 50%	130	11.0	279	30.0
More than 50%	1050	89.0	636	70.0
Total	**1180**	**100.0**	**915**	**100.0**

Note: NFC=Non-family controlled companies, FC=Family-controlled companies.

From the results in Table 5.7, 89% of non-family controlled companies do have more than half the board members holding a minimum of a degree qualification. The same trend also applies in the family-controlled companies with 70% of family companies having more than 50% of the board of directors with at least a degree qualification. While, only a small number, 11% of non-family controlled companies and 30% of family-controlled companies, have less than 50% of board members with a degree qualification. Thus, the results explain that education is one of the elements that support the achievement of the firm. Whether, for family-controlled or non-family

controlled companies, both consider that education of the directors may have a positive impact on firm performance.

Table 5.8

Frequency and percent by directors with professional qualification

Size	NFC	%	FC	%
0	25	2.1	20	2.0
1 to 2	650	55.0	629	69.0
3 to 4	400	34.0	224	24.0
More than 4	105	8.9	42	5.0
Total	**1180**	**100.0**	**915**	**100.0**

Note: NFC=Non-family controlled companies, FC=Family-controlled companies.

Table 5.8 describes the number of professional directors sitting on the board. The Code (2001) requires that boards must have at least one qualified director with an accounting background. On average, non-family controlled companies (55%) and family-controlled companies (69%) have around 1 to 2 directors on the board with professional memberships. This indicates that the level of compliance among Malaysian companies towards the Code (2001) is high. There are also companies with 3 to 4 professional directors, with 34% for non-family controlled and 24% for

family-controlled companies. However, 2% of the family and non-family controlled companies do not comply with the Code (2001) requirements. These companies (family and non-family controlled) still do not include professionals on the board of directors, even though it is required by the Code (2001).

Table 5.9

Frequency and percent by leadership structure

	NFC		FC	
	Frequency	**Percent**	**Frequency**	**Percent**
Duality	65	5.5	138	15.1
Separate	1115	94.5	777	84.9
Total	**1180**	**110.0**	**915**	**100.0**

Note: NFC=Non-family controlled companies, FC=Family-controlled companies.

Leadership structure is described in Table 5.9. In terms of leadership structure, separate leadership is highly practised among the non-family controlled and family-controlled companies. Table 5.9 shows that 94.5% or 1,115 for non-family controlled companies practise separate leadership, and only 5.5% practise duality leadership. The same trend also applies to family-controlled companies where 84.9% of the companies perform separate leadership as compared to

duality leadership (15.1%). This finding proves that companies listed on Bursa Malaysia fulfil the requirement of the Code (2001), which suggests that companies have separate leadership, as it shows a separation of power and control for the CEO and Chairman.

5.3.2 Ownership structure

Table 5.10

Frequency and percent by managerial, family and non-family managerial ownership

Range	Managerial		Non-family		Family	
	N	%	N	%	N	%
Less than 5%	610	29.1	758	64.2	23	2.5
5 to 25%	310	14.8	168	14.2	82	9.0
26% to 50%	737	35.2	179	15.2	507	55.4
More than 50%	438	20.9	75	6.4	303	33.1
Total	**2095**	**100.0**	**1180**	**100.0**	**915**	**100.0**

Table 5.10 indicates that 35.2% of the managers own around 26% to 50% of the shares. The next group is the managers with at least 5% managerial ownership. It is quite significant that about 21% of the managers own more than 50% shareholding in the companies. For the range of 26%

to 50% and more than 50% shareholding it is suspected that the majority of the managers are family directors and that they are also the controlling shareholders of the companies.

When the managerial shareholding is split into family-controlled and non-family controlled companies, it is found that in managerial non-family controlled companies, 64% of the non-family managers hold less than 5% shares in the companies, followed by 15% non-family directors with 26% to 50%, 14% of the sample with 5% to 25% shareholdings and only 6% have more than 50% shares in the companies. This indicates that non-family managers hold a small amount of shares in the companies with the majority not exceeding 5% ownership. In contrast to non-family managerial ownership, the highest range of shareholders in managerial family ownership is for the range of 26% to 50% shareholdings, with approximately 55% (507 family directors) in the companies. Next, the second highest range is the shareholding of more than 50% of company shares, which consists of 33% of the sample population, while 5% to 25% rank at the lowest level. The findings specify that family managers hold quite a significant amount of shares in the companies. Therefore, family managers have power and control over the company management.

5.3.3 Succession attributes for family-controlled companies

Table 5.11

Frequency and percent by category of CEO

	Frequency	Percent
Family manager (insider)	883	96.5
Professional manager (outsider)	32	3.5
Total	**915**	**100.0**

Table 5.11 illustrates the sample of CEO distribution in the family-controlled companies. It is found that the majority of CEOs are family members where he/she is the founder, son, daughter, cousin, brother, or spouse and only a few companies consider outsiders to be the CEO. The family CEO contributes 883 managers, which amounts to 96.5% of the population. There are also family-controlled companies that are managed by professional managers, however, the number is very low with only 32 CEOs (3.5%) from the sample. From the analysis, the results confirm that the majority of family-controlled companies favour their own flesh and blood to manage the family business, and that only a few consider outsiders for the position of CEO. The family companies strongly believe that family CEOs understand the family businesses better, possess greater knowledge, and promote loyalty and reputation (Daily & Dollinger, 1992; Donaldson & Davis, 1991, 1994; Davis et al., 1997).

Table 5.12

Frequency and percent by CEO's age

	Founder (1st Generation)		Successor (2nd Generation)	
	Frequency	**Percent**	**Frequency**	**Percent**
20 to 40 years	43	7.3	110	33.4
40 to 60 years	443	75.6	196	57.4
Above 60 years	100	17.1	23	9.2
Total	**586**	**100.0**	**329**	**100.0**

From the analysis conducted in Table 5.12, 443 family managers (75.6%) are in the first generation and 196 family managers (57.4%) are in the second family generation ages between 40 and 60 years. This finding is consistent with the study done by Tyee (2007). Next, family managers in second generation with ages 20 and 40 years were 110 CEOs (33.4%). They are expected to be the next leaders to take up the leadership in managing the family empires. For the first generation, family managers' aged 20 to 40 years are only 43 CEOs (7.3%). It is suspected that these are new and they might be managing new businesses that they have set up. There are quite a number of senior family CEOs (aged above 60 years) that are still actively involved in managing the companies. Examples of companies that have senior family CEOs (above 60 years old) are such as Hirotako Holdings Bhd, Box-Pak (M) Bhd, Globetronics Technology Bhd,

AMDB Bhd, Chee Wah Corporation Bhd, Ann Joo Resources Bhd, Farlim Bhd and White Horse Bhd. About 100 CEOs (17.1%) are in the first generation and 23 (9.2%) in the second generation. This shows that even though the family CEOs are senior in age, their skills, experience and ideas are highly needed in advising the family businesses. Thus, the results support the previous work by Becker (1973).

Table 5.13

Frequency and percent by CEO education level

	Founder (1st Generation)		**Successor (2nd Generation)**	
	Frequency	**Percent**	**Frequency**	**Percent**
Secondary to diploma level	314	53.6	79	24.0
Degree level and above	272	46.4	250	76.0
Total	**586**	**100.0**	**329**	**100.0**

Table 5.13 explains that for the first generation family companies, 53.6% (314) CEOs have low education background as compared to second generation with only 24% (79). However, the first generation companies also have about 272 CEOs (46.4%) with degree qualification and above.

In the second family generation companies, the trend towards CEOs with degree qualification is encouraging with 250 (76%). This shows that family companies are aware of the need for high calibre and knowledgeable CEOs to manage the business. There are an increasing number of family companies that send young successors to earn degrees (Ibrahim & Ellis, 1994). In contrast with the earlier practice, youngsters are now sent to college instead of only gaining work experience in the workplace like before (Goldberg, 1996). Perhaps, these new generation CEOs will be able to use and utilise the knowledge gained in managing the family businesses, thereby enhancing family firm performance.

Table 5.14

Frequency and percent by gender

	Founder (1st Generation)		**Successor (2nd Generation)**	
	Frequency	**Percent**	**Frequency**	**Percent**
Female	21	3.6	26	7.9
Male	565	96.4	303	92.1
Total	**586**	**100.0**	**329**	**100.0**

Table 5.14 illustrates that the majority of the first and second generation family CEOs are dominated by males. Male CEOs in the first generation are 565 (96.4%) and 303 (92.1%) in the second generation. Meanwhile, the female CEOs in the first generation are 21 (3.6%) and 26

(7.9%) in the second generation. These findings supported previous studies (Kuratko, 1993; Ket de Vries, 1993; Butner & Moore, 1997). Family businesses prefer to appoint males to lead the family companies. Males are presumed to be stronger, have larger networking, want to be the champion and are capable of leading the companies whereas females are more nurturing, supportive and care less about firm performance (Butner & Moore, 1997). The monarchy system practised in most Asian countries, including Malaysia, also favours the male gender (Kuratko, 1993). Some family companies see the choice of daughter/females as undesirable because with daughter involvement, indirectly the son-in-law will have the chance to act in the business. The founders foresee problems arising concerning the family name resulting from broken marriages, which will affect the daughter and, indirectly, disrupt the identity of the company and the family values for those people attached to the company. Therefore, female successors/daughters are unwelcome as heads of family companies (Ket de Vries, 1993).

Table 5.15

Frequency and percent by family generation

	Frequency	**Percent**
Founder (1st) generation	586	64.0
Successor (2nd) generation	329	36.0
Total	**915**	**100.0**

The data on family generation is described in Table 5.15. This study found that 586 companies or 64% of the sample of family-controlled companies in Malaysia are in the first generation. The second family generation is about 329 or 36% of the sample. From the results produced, it can be seen that companies listed on the Bursa Malaysia market are experiencing their first and second-generation phases.[18] Multiple generations are beneficial as it may bring fresh insight, experience and new knowledge to family businesses (Zahra, 2005). Therefore, family companies need to grab the opportunity to capitalize the talents and skills of their family members in promoting entrepreneurship and venturing into new markets.

Table 5.16

Mean and median for all, family-controlled and non-family controlled companies

(Transformed Data)

	All		FC		NFC		T-test for FC versus NFC and Mann-Whitney for dummy variable
	Mean	Median	Mean	Median	Mean	Median	
Q	.79	.81	.80	.83	.78	.80	4.94***
ROA	.02	.03	.03	.03	.01	.03	4.34***

[18] There are also companies that are managed by third family generation. Unfortunately, these companies are private limited companies, so the companies were not considered in this study. The companies are Royal Selangor International Sdn Bhd., Boh Plantation Sdn Bhd., KAJ Chortimall, Globe Silk Store and P Lal Store (Ngui, 2002).

	All		FC		NFC		T-test for FC versus NFC and Mann-Whitney for dummy variable
	Mean	Median	Mean	Median	Mean	Median	
ROE	.04	.05	.04	.06	.03	.05	0.40
EPS	.10	.7	.10	.07	.11	.07	-0.48
OCF	.08	.08	.08	.08	.07	.07	2.91***
FCF	21.32	13.04	44.41	45.38	3.95	0	71.59***
BSIZE	7.87	8.0	8.12	8.0	7.66	8.0	5.26***
BINED	.38	.38	.37	.33	.40	.38	(7.40)***
BDEG	.73	.75	.65	.67	.79	.83	(16.31)***
BEXP	.17	.14	.15	.14	.18	.17	(5.32)***
LSHIP	.90	1.0	.85	1.0	.94	1.0	(7.38)***
MOWN	28.01	29.32	n.a.	n.a.	n.a.	n.a.	35.88***
$MOWN^2$	1297.49	859.37	n.a.	n.a.	n.a.	n.a.	29.52***

	All		FC		NFC		T-test for FC versus NFC and Mann-Whitney for dummy variable
	Mean	Median	Mean	Median	Mean	Median	
$MOWN^3$	66431.63	25192.43	n.a.	n.a.	n.a.	n.a.	23.89***
FOWN	n.a.	n.a.	21.05	11.81	n.a.	n.a.	65.56***
$FOWN^2$	n.a.	n.a.	977.53	139.36	n.a.	n.a.	46.69***
$FOWN^3$	n.a.	n.a.	49693.01	1645.12	n.a.	n.a.	34.77***
NFOWN	n.a.	n.a.	n.a.	n.a.	6.87	0	(16.47)***
$NFOWN^2$	n.a.	n.a.	n.a.	n.a.	256.77	0	-0.28
$NFOWN^3$	n.a.	n.a.	n.a.	n.a.	11746.01	0	-0.69
CEO	n.a.	n.a.	.91	1.0	n.a.	n.a.	48.56***
EDUC	n.a.	n.a.	.57	1.0	n.a.	n.a.	(6.24)***
AGE	n.a.	n.a.	50.20	51.0	n.a.	n.a.	47.23***
GENDER	n.a.	n.a.	.96	1.0	n.a.	n.a.	(1.73)***

	All		FC		NFC		T-test for FC versus NFC and Mann-Whitney for dummy variable
	Mean	Median	Mean	Median	Mean	Median	
GEN	n.a.	n.a	1.35	1.0	n.a	n.a.	44.77***
DEBT	.09	.04	.08	.05	.09	.04	-1.55
FSIZE (LN)	12.85	12.71	12.76	12.59	12.93	12.82	(2.89)***
FAGE	8.96	4.0	7.99	4.0	9.73	5.0	(3.66)***
CP	.17	.00	.20	.00	.15	.00	3.35***
IP	.31	.00	.33	.00	.30	.00	1.31
TS	.19	.00	.12	.00	.25	.00	-8.0
PROP	.12	.00	.14	.00	.11	.00	2.13***
OTHERS	.12	.00	.11	.00	.13	.00	-1.32

Note: ALL=Family and non-family controlled companies, FC=Family-controlled, NFC=Non-family controlled, Q=Tobin's Q, ROA=Return on assets, ROE=Return on equity, EPS=Earnings per share, OCF=Operating cash flow, BSIZE=Board size, BINED=Board independence, BDEG=Directors with degree, BEXP=Directors with professional qualification, LSHIP=Leadership structure, MOWN=Managerial ownership, CEO=Family or outside CEO, EDUC=CEO education background, AGE=CEO age, GENDER=Company is headed by male or female CEO, GEN=First or second family generation, DEBT=Company's debt, FSIZE=Firm size, FAGE=Firm age, CP=Consumer product, IP=Industrial product, TS=Trading services, PROP=Properties, OTHERS=Plantation, construction, infrastructure projects, technology, hotel and mining.

Based on the results in Table 5.16, the t-test comparing the family-controlled and non-family controlled companies reveal that thare are differences in terms of corporate governance mechanisms (board and ownership structures) and succession attributes with firm performance. Family-controlled companies show higher mean values than non-family controlled companies for company indicators Q (mean = 0.8), ROA (mean = 0.03), ROE (mean = 0.04) and OCF (mean = 0.08). However, non-family controlled companies show a higher mean for EPS (mean = 0.11). On average, family companies in Malaysia hold 21% of shares in family businesses and the median is 13%.

In terms of board governance variables, the board size is 8 members per board for all companies, family-controlled and non-family controlled companies. This finding supports previous works done in Malaysia (PricewaterhouseCoopers, 1998; Abdullah, 2001; Amran & Che-Ahmad, 2009). In terms of independent directors, 38% of the board comprises independent non-executive directors. Companies in Malaysia comply with the Code (2001), which suggests that at least one-third of the board must be independent. On average, 73% of companies trading on Bursa Malaysia have directors with at least a degree qualification. The results show that companies need directors with at least a degree qualification to help the company management. However, for family-controlled companies, the percentage is slightly lower, 65%.

For variable directors with a professional qualification, overall, 17% of companies have professional directors on the board. Family-controlled companies have 15% and 18% of non-family controlled companies consisting of professional directors. This finding explains that the

acceptance level of professional directors on the board is still low. Companies need to include professional directors as part of the requirement by the Code (2001) where the board must consist of at least one professional director with an accounting qualification. Further, 90% of companies have separate leadership. Family-controlled companies show that 85% practice separate leadership. Thus, this finding is consistent with the Code (2001).

In terms of ownership structure, on average, managerial ownership in Malaysia is about 28% of the total shareholdings. This number is considered as quite significant. Family directors hold a higher number of shareholdings, with an average of 42% shareholdings in the companies. This indicates that family businesses hold nearly half of the total shares issued. Hence, family directors have the power and control of the businesses. For non-family directors, on average, the shareholding is 15% interest in the companies. Although the number is low compared to the family directors shareholding, non-family directors are rewarded with shares as a token of appreciation for the job done and part of the company strategy to enhance the firm performance.

For the succession attributes, 91% of the CEOs were found to be selected internally, that is, among the family members. Family businesses prefer to have family members as CEO because of certain factors, such as family members have greater knowledge, established social networks (Chung et al., 1987), smooth transition and stability because they are well acquainted and anticipate in developing the existing strategy (Carlson, 1961). Internal successions also promote loyalty and reputation, thus, family CEOs have the incentive to ensure the firms profitability (Kimberly & Evanisko, 1981; Davis et al., 1997). Among the family-controlled companies, 57%

prefer the CEOs to have at least a first degree qualification in order to run the family business. Education provides an advantage to the family business to strategise and find new opportunities to expand their business. This will help businesses to excel and earn higher profits. The average age of the CEOs in Malaysia is 51 years. A higher age is found to have a greater advantage in making decisions. Matured directors are more conservative and make better judgements (Muth & Donaldson, 1998). They seek more information and value the information correctly before making any decisions (Daboud et al., 1995). Mature directors also have more experience (Shaw et al., 2009) and the chance of a firm's managerial success is higher (Brockmann & Simmonds, 1997). The trend preferring male to female CEOs is largely due to society's perception, which favours men to women (Prasso, 1996); men are more competitive, stronger and have wider networking (Butner & Moore, 1997).

In terms of the control variables, the amount of debts in the companies is around 8% to 9%. Most companies in Malaysia have a firm size, on average, of RM 2.55 million. This is quite similar for family and non-family controlled companies. Malaysian companies are also found to have an average firm age of 8 to 10 years in business operation.

5.4 Univariate analysis

In this study, the t-test and Pearson correlation matrix were conducted for all companies, family-controlled and non-family controlled, to test the key variables.

5.4.1 T-test for all samples

Table 5.17 exhibits the t-test results for key variables used in this study. In the t-test, Family-controlled firm (FCF), leadership (LSHIP), CEO (Family or professional), CEO education (EDUC), CEO age (AGE), CEO gender (GENDER) and family generation (GEN) were measured using dichotomous values. Other variables measured using continuous variables were board size (BSIZE), board independence (BINED), board with degree qualification (BDEG), director with professional qualification (BEXP), managerial ownership (MOWN), family ownership (FOWN), and non-managerial ownership (NFOWN). All the variables are coded using dummy (1, 0). FCF = Family controlled firm = 1, 0 otherwise. BSIZE = More than 8 members = 1, less than 8 members = 0, BINED = Less than or equal 1/3 of board size = 0, More than 1/3 or board size = 1, BDEG = More than 50% directors with degree = 1, Less than 50% with degree = 0, BEXP = More than 50% directors with professional qualification = 1, Less than 50% with professional qualification, LSHIP = Separate leadership = 1, duality leadership = 0, MOWN = Shareholdings of less than 5% = 0, Shareholdings more than 5% = 1, FOWN = If more than 20% shareholding = 1, less than 20% shareholding = 0, CEO = CEO from family member = 1, outside CEO = 0, EDUC = CEO with degree and above = 1, CEO with diploma and below = 0, AGE = CEO age less than 40 years old = 0, CEO more than 40 years old = 1, GENDER = Company headed by male = 1, female = 0, GEN = Founder/ 1st generation = 1, Successor/ 2nd generation = 0.

Table 5.17

T-test results for key variables with firm performance indicators for all companies, family-controlled and non-family controlled companies

t/z value						
Panel A: All companies						
	Expected sign	**Q**	**ROA**	**ROE**	**EPS**	**OCF**
FCF[a]	+	-4.975***	-3.257***	-2.62***	-1.772*	-2.968***
BSIZE	+/-	.969	-5.474***	-2.538*	-6.587***	-6.795***
BINED	+/-	-.145	4.982***	2.616***	2.739***	5.971***
BDEG	+	3.775***	.032	-.460	-2.688***	-.268
BEXP	+	-1.004	3.702***	-.661	2.069**	2.498**
LSHIP[a]	+/-	-2.912***	-.691	-.755	-1.326	-1.373
MOWN	+	-2.595**	6.875***	1.836*	2.271**	4.101***

t/z value						
Panel B: Family-controlled						
Variable	**Expected sign**	**Q**	**ROA**	**ROE**	**EPS**	**OCF**
BSIZE	+/-	-.968	2.828***	2.175***	3.628***	3.583***
BINED	+/-	1.115	-2.410**	-1.540	-.092	-2.676***
BDEG	+	-3.265***	2.530**	1.103	3.330***	1.488
BEXP	+	-1.842*	-.579	-3.914***	-1.786*	-1.066
LSHIP[a]	-	-1.477	-1.469	-1.550	-.373	-2.781***
FOWN	+	-2.851***	1.430	.608	1.364	1.520
CEO[a]	+	-7.015***	-.483	-.408	-3.851***	-.986
EDUC[a]	+	-.188	-1.914*	-.610	-1.912*	-1.248
AGE[a]	+/-	-1.347	-.306	-.258	-.449	-.203
GENDER[a]	+/-	-.839	-.438	-1.096	-1.281	-.204
GEN[a]	+	-4.339***	-2.896***	-1.735*	-4.022***	-.204

t/z value						
Panel C: Non-family controlled						
Variable	**Expected sign**	**Q**	**ROA**	**ROE**	**EPS**	**OCF**
BSIZE	+	-.980	5.716***	1.842*	4.809***	5.646***
BINED	+	-1.494	-.976	.667	-.848	-1.056
BDEG	+	-.453	-.440	.065	1.441	.149
BEXP	+	1.786*	-1.962*	1.056	-1.589	-1.171
LSHIP[a]	+	-1.519	-1.449	-1.354	-2.183**	-1.895*
NFOWN	+	.238	-3.931***	-2.382**	-6.540***	-5.577***

Note: * significant at 0.1 (2 tailed), ** significant at 0.05 (2 tailed), ***significant at 0.01 (2 tailed).
[a]FCF, LSHIP, CEO, EDUC, AGE, GENDER and GEN are measured using Mann Whitney test (z value).
BSIZE=More than 8 members=1, less than 8 members=0, BINED=Less than or equal 1/3 of board size=0, More than 1/3 or board size=1, BDEG=More than 50% directors with degree=1, Less than 50% with degree=0, BEXP=More than 50% directors with professional qualification=1, Less than 50% with professional qualification, LSHIP=Separate leadership =1, duality leadership=0, MOWN=Shareholdings of less than 5%=0, Shareholdings more than 5%=1, FOWN=If more than 20% shareholding=1, less than 20% shareholding=0, CEO=CEO from family member=1, outside CEO=0, EDUC= CEO with degree and above=1, CEO with diploma and below=0, AGE=CEO age less than 40 years old=0, CEO more than 40 years old=1, GENDER=Company headed by male=1, female=0, GEN=Founder/ 1st generation=1, Successor/ 2nd generation=0.

Table 5.17 explains that there is a significant difference between family-controlled and non-family controlled companies with all the performance indicators tested. BSIZE shows a negative relationship with performance indicators for all companies, but positive with family-controlled and non-family controlled companies. There is a significant difference between Malaysian companies that have a small board size and those with a large board size. BINED shows a positive direction for all companies, but negative for family-controlled companies. This explains that there is a difference in firm value for companies that have more than 1/3 independent non-executive directors with companies that have less or equal to a 1/3 independent non-executive directors. BDEG is found to show mixed results. It indicates that there are differences for companies that have directors with degree qualification with firm performance for all companies including family-controlled companies. BEXP reveals a positive direction for all companies, a negative sign for family-controlled companies and mixed for non-family controlled companies with firm performance tested in this study. Thus, differences in company performance exist between companies that have more professional directors (experts) and less professional directors on the board. LSHIP shows an inverse relationship with performance. There is a significant difference for companies that applied separate leadership or duality leadership with firm value. In terms of ownership structure, managerial ownership, family managerial ownership and non-family managerial ownership show differences in firm performance.

For the succession attributes, the CEO has a significant difference in value (Q and OCF) as to whether the company is managed by a family member or outsider. EDUC is found to have a negative relationship with ROA and EPS. There is a difference between CEOs that possess a

degree and those without a degree. GEN shows a negative relationship with Q, ROA and EPS. This explains that there is an impact on firm value as there is a difference between first and second family generation with firm performance indicators.[19]

The overall results are consistent with the theory developed in Chapter 3. However, formal tests of the hypotheses are done using the multivariate models and discussed in the following Section 5.6.

5.4.2 Pearson Correlation Matrix

The Pearson's correlation matrix was employed to examine the existence of multicollinearity among the variables. Table 5.18 to Table 5.20 show that the Pearson's correlation coefficients' absolute values between the independent variables are lower than the 0.80 threshold value for potential multicollinearity (Gujarati, 2003, p.359) and 0.90 (Pallant, 2001, p.137; Hair et al., 2006, p. 191). Either way, multicollinearity is solved by using the panel data analysis method.

[19] The multivariate results will be discussed in Section 5.6, which will be more comprehensive.

5.4.2.1 For equation 4.1 (all companies)

Table 5.18
Pearson's Correlation test for all companies (Transformed data)

	Q	ROA	ROE	EPS	OCF	FCF	BSIZE	BINED	BDEG	BEXP	LSHIP	MOWN	DEBT	FSIZE	FAGE	CP	IP	TS	PROP	OTHERS
Q	1																			
ROA	.05**	1																		
ROE	-.03	.37***	1																	
EPS	-.05**	.53***	.30***	1																
OCF	.03	.88***	.34***	.55***	1															
FCF	.11***	.08***	.01	-.00	.04	1														
BSIZE	-.03	.18***	.07***	.16***	.18***	.09***	1													
BINED	.01	-.10**	-.02	-.04	-.09***	-.16***	-.19***	1												
BDEG	-.06***	.03	.03	.10***	.03	-.36***	-.10***	.12***	1											
BEXP	.02	-.03	.03	.01	-.01	-.10**	-.24***	.23***	.21***	1										
LSHIP	-.07***	-.01	.01	.02	-.02	-.15***	.01	.07***	.17***	.04	1									
MOWN	.07***	.05*	-.01	-.05**	-.00	.76***	.05**	-.14***	-.33***	-.09***	-.19***	1								
DEBT	-.02	.05*	.04	.10***	.09***	-.02	.08***	.01	.08***	.01	-.05**	-.02	1							
FSIZE	-.17***	.24***	.10***	.36***	.22**	-.09***	.30***	.03	.32***	-.06***	.03	-.12***	.43***	1						
FAGE	-.01	-.03	-.04	-.02	-.05**	-.05**	.05**	.09***	.03	-.08***	-.01	-.04	.09***	.08***	1					
CP	-.04	.01	-.02	.01	.02	.06***	-.02	-.03	-.11***	.00	-.02	.02	-.13***	-.12***	-.11***	1				
IP	.15***	-.03	-.02	-.05**	.04	-.00	-.06**	-.06***	-.10***	-.02	-.00	-.01	-.13***	-.24***	-.08***	-.31***	1			
TS	-.05**	-.01	.01	.00	.02	-.15***	.02	.04	.10***	-.03	.02	-.14***	.13***	.14***	.11***	-.22***	-.33***	1		
PROP	.01	-.01	-.02	-.03	-.10***	.09***	-.02	.02	.13***	.08***	.02	.09***	.10***	.13***	.08***	-.17***	-.25***	-.18***	1	
OTHERS	.08***	.06**	.02	.09***	.04	-.02	.06***	.10***	.02	-.02	-.07***	.00	.07***	.13***	.12***	-.17***	-.25***	-.18***	-.14***	1

Notes: ***significant at 1% level (2 tailed), **significant at 5% level (2 tailed), *significant at 10% level (2 tailed). Q= Tobin's Q, ROA=Return on assets, ROE=Return on equity, EPS=Earnings per share, OCF=Operating cash flow, FCF=Family-controlled company, BSIZE=Board size, BINED=Board independence, BDEG=Directors with degree qualification, BEXP=Directors with professional qualification, LSHIP=Leadership structure, MOWN=Managerial ownership, DEBT=Company's debt, FSIZE=Firm size, FAGE=Firm age, CP=Consumer product, IP= industrial product, TS=Trading services, PROP=Properties, OTHERS=Plantation, construction, infrastructure projects, technology, hotel and mining.

5.4.2.2 For equation 4.2 (family-controlled companies)

Table 5.19
Pearson's Correlation test for family-controlled companies (Transformed data)

	Q	ROA	ROE	EPS	OCF	BSIZE	BINED	BDEG	BEXP	LSHIP	FOWN	CEO	EDUC	AGE	G'DER	DEBT	FSIZE	FAGE	CP	IP	TS	PROP	OTHERS
Q	1																						
ROA	.11***	1																					
ROE	.03	.541***	1																				
EPS	.13***	.59***	.34***	1																			
OCF	.041	.87***	.47***	.54***	1																		
BSIZE	-.05	.14***	.12***	.19***	.15***	1																	
BINED	.11***	-.07**	-.02	.05	-.08**	-.22***	1																
BDEG	-.08**	.04	-.01	.08**	-.02	-.17***	.11***	1															
BEXP	.00	-.04	-.01	-.02	-.05	-.25***	.21***	.17***	1														
LSHIP	-.05	-.03	.01	.01	-.09***	-.02	.04	.12***	.09***	1													
FOWN	.09***	.13***	.06	.21***	.08**	.01	-.04	-.05	-.05	.03	1												
CEO	.22***	.05	.03	.08**	.05	.04	-.06	-.17***	.00	-.017	.20***	1											
EDUC	-.01	.06	.00	.08***	-.02	-.09***	.09***	.42***	.05	.02	-.11***	-.02	1										
AGE	-.06	-.03	-.02	-.05	-.01	.07**	-.10***	-.06	.00	-.12***	.08**	-.04	-.33***	1									
G'DER	.01	.07	.04	.04	.03	.15***	-.09***	-.13***	-.09***	-.02	-.05	.19***	-.06	.09***	1								
DEBT	-.07**	-.01	.04	.04	.07**	.16***	.02	.01	-.06	-.15***	.05	-.02	-.13***	-.01	-.01	1							
FSIZE	-.16***	.17***	.12***	.36***	.09***	.29***	.06	.27***	-.06	-.02	.11***	-.07**	.13***	-.02	.07**	.47***	1						
FAGE	-.08**	-.02	-.05	.06	.02	.13***	-.02	.04	-.12***	-.07**	.10***	-.05	.11***	-.05	.06	.11***	.17***	1					
CP	-.04	-.02	-.03	-.03	.02	-.07**	-.07**	-.15***	.06	.06	.12***	.10***	-.07**	.06	-.03	-.07**	-.21***	-.05	1				
IP	.08**	-.00	-.01	-.05	.10***	-.00	.03	-.08**	-.04	-.03	-.15***	.03	-.09***	-.00	-.04	-.08**	-.17***	.02	-.35***	1			
TS	-.13***	-.03	.02	-.05	-.02	-.02	.04	-.02	-.03	-.07	.00	-.07**	.06	-.08**	.07**	.06	.01	.05	-.19***	-.26***	1		
PROP	.06	-.03	-.01	-.01	-.16***	-.07**	.05	.23***	.12***	.04	.02	-.11***	.06	-.04	-.11***	.12***	.28***	.02	-.20***	-.28***	-.15***	1	
OTH	.24***	.09***	.03	.16***	.02	.15***	.05	.02	-.17***	-.10***	.08**	-.02	.10***	.06	.07**	.02	.17***	.10***	-.17***	-.24***	-.13***	-.14***	1

Notes: ***significant at 1% level (2 tailed), **significant at 5% level (2 tailed), *significant at 10% level (2 tailed). Q= Tobin's Q, ROA=Return on assets, ROE=Return on equity, EPS=Earnings per share, OCF=Operating cash flow, FCF=Family-controlled company, BSIZE=Board size, BINED=Board independence, BDEG=Directors with degree qualification, BEXP=Directors with professional qualification, LSHIP=Leadership structure, FOWN=Family ownership, CEO= Family or professional CEO, EDUC= CEO education qualification, AGE= CEO age, G'DER= CEO gender, DEBT=Company's debt, FSIZE=Firm size, FAGE=Firm age, CP=Consumer product, IP= industrial product, TS=Trading services, PROP=Properties, OTHERS=Plantation, construction, infrastructure projects, technology, hotel and mining.

5.4.2.1 For equation 4.3 (non-family controlled companies)

Table 5.20
Pearson's Correlation test for non-family controlled companies (Transformed data)

	Q	ROA	ROE	EPS	OCF	BSIZE	BINED	BDEG	BEXPT	NFOWN	DEBT	FSIZE	FAGE	CP	IP	TS	PROP	OTHERS
Q	1																	
ROA	.03	1																
ROE	-.05	.34***	1															
EPS	-.12***	.52***	.29***	1														
OCF	.02	.88***	.31***	.55***	1													
BSIZE	-.05	.19***	.06**	.16***	.19***	1												
BINED	-.02	-.09***	-.02	-.07**	-.10***	-.16***	1											
BDEG	.01	.09***	.06**	.12***	.09***	.03	.05	1										
BEXP	.05	-.01	.05	.01	.01	-.22***	.22***	.19***	1									
NFOWN	-.03	-.06**	-.04	-.13***	-.10***	-.07**	-.06**	-.23***	-.02	1								
DEBT	.02	.07**	.04	.12***	.10***	.04	-.01	.12***	.05	-.03	1							
FSIZE	-.17***	.27***	.09***	.36***	.27***	.33***	.00	.35***	-.07**	-.20***	.41***	1						
FAGE	.04	-.02	-.04	-.04	-.07**	.02	.13***	-.02	-.08***	-.03	.08***	.03	1					
CP	-.06**	.02	-.02	.03	.00	-.01	.02	-.01	-.03	-.13***	-.17***	-.04	-.14***	1				
IP	.21***	-.04	-.02	-.06**	.01	-.10***	-.12***	-.13***	-.00	.06	-.17***	-.29***	-.15***	-.27***	1			
TS	.03	.02	.01	.01	.05	.07**	.00	.09***	-.07**	-.07**	.16***	.19***	.12***	-.24***	-.39***	1		
PROP	-.03	-.01	-.02	-.04	-.09***	.02	.03	.09***	.06**	.10***	.10***	.05	.14***	-.14***	-.23***	-.20***	1	
OTHERS	-.03	.06	.02	.07**	.06**	-.00	.12***	-.01	.07**	.01	.09***	.11***	.14***	-.16***	-.25***	-.23***	-.13***	1

Notes: ***significant at 1% level (2 tailed), **significant at 5% level (2 tailed), *significant at 10% level (2 tailed). Q= Tobin's Q, ROA=Return on assets, ROE=Return on equity, EPS=Earnings per share, OCF=Operating cash flow, FCF=Family-controlled company, BSIZE=Board size, BINED=Board independence, BDEG=Directors with degree qualification, BEXP=Directors with professional qualification, LSHIP=Leadership structure, NFOWN=Non-family ownership, DEBT=Company's debt, FSIZE=Firm size, FAGE=Firm age, CP=Consumer product, IP= industrial product, TS=Trading services, PROP=Properties, OTHERS=Plantation, construction, infrastructure projects, technology, hotel and mining.

Table 5.18 presents the Pearson correlations for all companies. The results suggest that FCF has a significant positive relationship with Q and ROA. BSIZE has shown a strong correlation with ROA, ROE, EPS, OCF and FCF. For BINED, the correlation was significant and negatively related with ROA, OCF, FCF and BSIZE. BDEG shows a mixed direction in findings, whereby it was negatively correlated with Q, FCF and BSIZE, but positively correlated with EPS and BINED. BEXP was negatively related with FCF and BSIZE, but has a negative correlation with BINED and BDEG. In terms of LSHIP, there was a strong negative correlation with Q and FCF, but a positive correlation with BINED and BDEG. MOWN reveals a positive direction with Q, ROA, FCF and BSIZE, but inversely with EPS, BINED, BDEG, BEXP and LSHIP.

Table 5.19 explains the correlation signs for family-controlled companies. BSIZE shows a positive direction with ROA, ROE, EPS and OCF. Meanwhile, BINED shows a positive direction with Q, but an opposite direction with ROA, OCF and BSIZE. Next, BDEG has a negative relationship with Q and BSIZE, but a positive correlation with EPS and BINED. LSHIP was negatively related with OCF, but has a positive direction with BDEG and BEXP. FOWN has shown a positive direction with Q, ROA, EPS and OCF. CEO was positively correlated with Q, EPS and FOWN, but shows a negative correlation with BDEG. EDUC shows a positive sign with EPS, BINED, BDEG, but has an inverse direction with BSIZE, FOWN. AGE was positively related with BSIZE and FOWN. On the other hand, AGE was inversely correlated with LSHIP and EDUC. GENDER was positively related with BSIZE, CEO and AGE, but shows a negative direction with BINED, BDEG and BEXP.

Table 5.20 illustrates the correlation matrix for non-family controlled companies. BSIZE has a positive correlation with ROA, ROE, EPS and OCF. BINED was found to have a negative correlation with ROA, EPS, OCF and BSIZE. For BDEG, there was a positive correlation with ROA, ROE, EPS and OCF. BEXP has a negative correlation with BSIZE, but shows a positive correlation with BINED and BDEG. The NFOWN shows a negative correlation with ROA, EPS and OCF. Overall, the correlation values for all companies, family-controlled companies and non-family controlled companies are within the suggested threshold value (Pallant, 2001; Gujarati, 2003; Hair et al., 2006).

5.5 Testing for panel data

In this section, this study presents the results of multicollinearity, heteroscedasticity, autocorrelation and the Hausman tests, which were conducted to examine whether the data violates the underlying statistical assumptions. When the data meets the tests the multivariate analyses are utilised.

5.5.1 Results of multicollinearity

Table 5.21

VIF Tests for All, FC and NFC

Variable	All	FC	NFC
FCF	2.56	n.a.	n.a.

Variable	All	FC	NFC
BSIZE	3.74	1.33	1.21
INED	3.74	1.15	1.12
BDEG	1.17	1.52	1.27
BEXP	1.17	1.18	1.18
LSHIP	1.07	1.08	1.12
MOWN	2.49	n.a.	n.a.
FOWN	n.a.	1.17	n.a.
NFOWN	n.a.	n.a.	1.20
CEO	n.a.	1.17	n.a.
EDUC	n.a.	1.49	n.a.
AGE	n.a.	1.21	n.a.
GENDER	n.a.	1.14	n.a.
GEN	n.a.	1.51	n.a.
DEBT	1.04	1.16	1.02

Variable	All	FC	NFC
FSIZE	1.40	1.55	1.44
FAGE	1.08	1.12	1.13
CP	2.69	2.45	3.07
IP	3.52	2.93	4.36
TS	2.91	1.99	4.01
PROP	2.28	2.16	2.54
OTHERS	2.34	2.00	2.86
Mean VIF	**2.42**	**1.54**	**1.97**

Note: FCF=Family-controlled company, BSIZE=Board size, BINED=Board independence, BDEG=Directors with degree, BEXP=Directors with professional qualification, LSHIP=Leadership structure, MOWN=Managerial ownership, FOWN=Family managerial ownership, NFOWN=Non-family managerial ownership, CEO=Family or outside CEO, EDUC=CEO education background, AGE=Age of the CEO, GENDER=CEO gender, GEN = Family generation, DEBT=Company's debt, FSIZE=Firm size, FAGE=Firm age, CP=Consumer product, IP=Industrial product, TS=Trading services, PROP=Properties, OTHERS=Plantation, construction, infrastructure projects, technology, hotel and mining.

The variance inflation factors (VIF) of the variables for all models were examined. Table 5.21 illustrates that VIF for all companies ranges from 1.04 to 3.74. For family-controlled companies, the VIF values are from 1.08 to 2.93 and those in non-family controlled companies range from 1.02 to 4.36. Thus, the VIF for all three models were found to be around 1.02 to 4.36, which is below the threshold value of 10 (Gujarati, 2003, p. 362;

Hair et al., 2006, p. 193; Ho, 2006, p. 258). Thus, multicollinearity is not likely to affect the regression analysis, which allows for the standard interpretation of the regression coefficients.

5.5.2 Results of Hausman specification test

Table 5.22

Hausman specification tests

Panel A: All companies					
	Q	ROA	ROE	EPS	OCF
$Chi^2(11)$	23.18	23.81	47.36	34.26	21.94
$Prob>chi^2$	0.0167	0.0135	0.0000	0.0003	0.0248
Panel B: Family-controlled companies					
	Q	ROA	ROE	EPS	OCF
$Chi^2(13)$	27.06	39.21	15.64	46.84	23.85
$Prob>chi^2$	0.0122	0.0002	0.2692	0.0000	0.0326
Panel C: Non-family controlled companies					
	Q	ROA	ROE	EPS	OCF
$Chi^2(10)$	20.12	14.03	48.52	18.42	15.11
$Prob>chi^2$	0.0282	0.1715	0.0000	0.0483	0.1282

The Hausman specification test examines if the individual effects are uncorrelated with other regressors in the model. The FE model is a model with random effects that correlate with the explanatory variables, while the RE model is a specific case with zero correlation. The Hausman test checks the null hypothesis that the coefficients estimated by the efficient random effects estimator are the same as the ones estimated by the consistent fixed effects estimator. If they are (insignificant p-value, prob>chi^2 larger than .05) then it is safe to use random effects, otherwise fixed effects are used. The Hausman test checks a more efficient model against a less efficient but consistent model to make sure that the more efficient model also gives consistent results (Davidson & MacKinnon, 1993; Greene, 2003; Stock & Watson, 2007).

From the results revealed in Table 5.22, for Panel A (all companies), a significant p-value is found (prob<chi^2 larger than .05). Meanwhile, Panel B (family-controlled companies) data reveals a significant p-value for Q, ROA, EPS and OCF, but not for ROE. Panel C (non-family controlled companies) shows a significant p-value for Q, ROE and EPS, but not for ROA and OCF. Hence, FE is used for the panel data analyses.

5.5.3 Results of heteroscedasticity

Table 5.23

Breusch-Pagan/Cook-Weisberg Test

Chi^2 (p-value)	All	FC	NFC
Q	71.42(0.00)	54.32 (0.00)	20.54 (0.00)
ROA	546.33 (0.00)	46.69 (0.00)	280.94 (0.00)
ROE	201.42(0.00)	673.39 (0.00)	32.83 (0.00)
EPS	357.29(0.00)	86.58 (0.00)	166.41 (0.00)
OCF	218.63(0.00)	7.09 (0.01)	209.7 (0.00)
Ho (null):	Rejected	Rejected	Rejected

Note: Ho (null): Constant variance (homoscedasticity), FC=Family-controlled, NFC=Non-family controlled, Q=Tobin's Q, ROA=Return on assets, ROE=Return on equity, EPS=Earnings per share, OCF=Operating cash flow.

Table 5.23 shows the results of the Breusch-Pagan/Cook-Weisberg test. The results show that the p-value is less than 0.05 for all companies, family-controlled companies and non-family controlled companies. Thus, the models reject the null hypothesis and indicate that there is a problem of heteroscedasticity. This result shows that the variance is not constant and needs to be rectified.

The remedy for heteroscedasticity is to use White Heteroscedasticity Consistent Variance and Standard error technique as suggested by Gujarati (2003, p. 413). The test is conducted using software STATA. The White Heteroscedasticity Consistent Variance and Standard matrix estimators reduce standard error in some cases and an increase in others. The fluctuations result in the t-statistics increasing or decreasing, respectively, with no change in the coefficient. The results do not differ significantly from previous regression. There are only slight changes in the t-statistic and p-values to reflect the correction done by the estimator.

5.5.4 Results of autocorrelation

Table 5.24

Wooldridge Test

F (p-value)	All (Eq. 4.1)	Ho	FC (Eq. 4.2)	Ho	NFC (Eq. 4.3)	Ho
Q	95.56 (0.00)	Rejected	57.00 (0.00)	Rejected	50.78 (0.00)	Rejected
ROA	0.83 (0.36)	Not rejected	1.85 (0.18)	Not rejected	0.87 (0.35)	Not rejected
ROE	1.32 (0.25)	Not rejected	0.79 (0.38)	Not rejected	1.89 (0.17)	Not rejected
EPS	24.36 (0.00)	Rejected	7.12 (0.01)	Rejected	23.64 (0.00)	Rejected

F (p-value)	All (Eq. 4.1)	Ho	FC (Eq. 4.2)	Ho	NFC (Eq. 4.3)	Ho
OCF	0.03 (0.86)	Not rejected	1.64 (0.20)	Not rejected	0.02 (0.90)	Not rejected

Note: Ho (null): No first-order autocorrelation, Q=Tobin's Q, ROA=Return on assets, ROE=Return on equity, EPS=Earnings per share, OCF=Operating cash flow.

From the results in Table 5.24, the Wooldridge Test was conducted to see whether there is an autocorrelation problem in the data. From the analysis done, it was found that autocorrelation does exist in the data when the performance indicators are Q and EPS. Next, the Durbin-Watson d statistic test was also conducted to identify any first-order serial correlation in the disturbances when all the regressors are strictly exogenous.

Table 5.25

Durbin-Watson and Prais-Winsten Transformation

		All (Eq. 4.1)	FC (Eq. 4.2)	NFC (Eq. 4.3)
Q	Original	.29	.34	.30
	Transformed	1.52	1.46	1.56
ROA	Original	1.05	.66	1.15
	Transformed	1.56	1.60	1.54

		All (Eq. 4.1)	FC (Eq. 4.2)	NFC (Eq. 4.3)
ROE	Original	1.17	1.70	1.09
	Transformed	1.59	1.47	1.58
EPS	Original	.63	.79	.61
	Transformed	1.31	1.55	1.25
OCF	Original	.92	.61	1.02
	Transformed	1.67	1.58	1.67

Note: Q=Tobin's Q, ROA=Return on assets, ROE=Return on equity, EPS=Earnings per share, OCF=Operating cash flow.

The results, as illustrated in Table 5.25, indicate that the problem of positive autocorrelation exists. Thus, to overcome the autocorrelation problems, this study uses the GLS method, by transforming the error term to be serially independent by using the Prais-Winsten transformation (Chen et al., Stata Web Books).

From the analyses conducted above, the univariate test, Hausman test, Breusch-Pagan/Cook-Weisberg test, Wooldridge test, Durbin-Watson and Prais-Winsten test, results show that the analyses have to be done using GLS to correct for heteroscedasticity

and autocorrelation. Next, the multivariate tests were conducted to provide more meaningful analysis for this study.

5.6 Multivariate analysis

5.6.1 GLS estimation of all companies: Family-controlled companies (H_1), board governance (H_2 to H_6) and managerial ownership (H_7)

The following multivariate analysis utilised the GLS method. In this part, family-controlled and non-family controlled companies are added together as a sample. The following analyses are divided into three parts. Sub-section 5.6.1.1 discusses on family-controlled companies (H_1), sub-section 5.6.1.2 explains board governance mechanisms (H_2 to H_6) and sub-section 5.6.1.3 highlights managerial ownership (H_7).

Table 5.26

Regression results for GLS estimation for all companies (H_1 to H_7)

			Model A	Model B	Model C	Model D	Model E
	H	Expected sign	Q	ROA	ROE	EPS	OCF
FCF	H_1	+	.0005***	.0003***	.0004***	.0004***	.0002***
BSIZE	H_2	+/-	.0005	.0032***	.0060***	.0056***	.0043***
BINED	H_3	+/-	-.0017	-.0281***	.0254**	-.0419**	-.0317***

			Model A	Model B	Model C	Model D	Model E
	H	Expected sign	Q	ROA	ROE	EPS	OCF
BDEG	H_4	+	.0107	-.0032	.0068	.0081	-.0099*
BEXP	H_5	+	.0157	.0191***	.0956***	.0478**	.0216**
LSHIP	H_6	+/-	-.0181***	-.0005	-.0075	.0071	-.0062*
MOWN	H_7	+	-.0004	-.0019***	-.0013***	-.0046***	-.0019***
$MOWN^2$	H_7	-	.0000	.0001***	.0000**	.0001***	.0001***
$MOWN^3$	H_7	+	-3.50e-07*	-5.29e-07***	-4.18e-07**	-1.09e-06***	-4.56e-07***
DEBT		-	.0293***	-.0179*	-.0515	-.0036	-.0093
FSIZE		+	-.0138***	.0128***	.0209***	.0629***	.0129***
FAGE		+	-.0001	-.0003***	-.0007***	-.0005*	-.0005***
CP		+	.0759***	.0178***	-.0232***	.0571***	.0245***
IP		+	.1027***	.0169***	-.0076	.0318***	.0383***
TS		+	.0867***	.0075**	-.0147*	-.0039	.0252***
PROP		+	.0951***	.0049	-.0484***	-.0294***	-.0147***
OTHERS		+	.1162***	.0219***	-.0051	.0383***	.0251***
_CONS			.8881***	-.1599***	-.2695***	-.7624***	-.1165***

			Model A	Model B	Model C	Model D	Model E
	H	Expected sign	Q	ROA	ROE	EPS	OCF
R^2			13.08	18.2	6.79	22.94	17.18
Adj. R^2			12.09	9.3	2.11	15.64	11.01
F stats			17.77	13.5	3.63	23.9	16.09
P value			0.00	0.00	0.00	0.00	0.00

5.6.1.1 The effect of family-controlled companies on firm performance for all companies (H_1)

From the analysis in Table 5.26, it is found that family-controlled companies (H_1) have higher firm value than non-family controlled companies for Q (p value = .0005***), ROA (p value = .0003***), ROE (p value = .0004***), EPS (p value = .004***) and OCF (p value =. 0002***) tested in this study. These findings support previous studies (Daily & Dollinger, 1992; Anderson & Reeb, 2003; Lee, 2004; Maury, 2006; Martinez et al., 2006; Ibrahim et al., 2009, Hamadi, 2010). Family-controlled companies show a significant positive relationship with company performance as claimed by agency theory and stewardship theory. This result implies that the greater the family-control, the higher the firm value. This finding is consistent with Daily and Dollinger (1992) who found that

family firms are likely to achieve higher performance than non-family firms. Family companies reported higher sales growth and greater improvement in net margins than the non-family firms. Anderson and Reeb (2003) also found that family firms perform better than non-family firms, both in terms of market and accounting measures (Q and ROA).

Family firms have greater efficiency and higher profitability than those owned by diverse shareholders. Family firms outperform their competitors, at least economically, because family ownership and management tend to enhance cost efficiency and, thus, promote higher ROI (Lee, 2004). Maury (2006) and Martinez et al. (2007) concurred that active family control continues to outperform non-family control in terms of profitability in different legal regimes. Family control has been shown to have lower agency problems between owners and managers. A local study by Ibrahim et al. (2009) also evidenced that family ownership experiences a higher value (ROE as firm performance indicator) than non-family ownership. A study by Hamadi (2010) supports that the presence of large shareholders in family firms has a positive impact on firm performance. Therefore, the results in this study are significant and positive in all estimations using all measurements of performance (i.e. Q, ROA, ROE, EPS and OCF). Hence, hypothesis H_1 is supported in this study.

5.6.1.2 The effect of board governance on firm performance for all companies (H_2 to H_6)

Board governance variables (H_2 to H_6) were found to have a significant effect on firm performance. Board size (BSIZE) and board expert (BEXP) show a positive direction, while board education background (BDEG) and leadership structure (LSHIP) show a negative relationship with firm performance indicators (Model A to E). Board independence (BINED) reveals mixed findings (for Model A to E). Findings show that board governance variables enhance more when measure using the accounting indicators (ROA, ROE, EPS and OCF) as compared to market based measurement (Q). One of the reasons could be to the nature of measurement for Tobin's Q. While accounting data for ROA, ROE, EPS and OCF are rather straight forward based on accrual audited data, the measurement of Tobin's Q is based on share prices which would fluctuate over the years. The share prices are influenced not only to financial performance of the companies but also by other external factors such as political, economic and world trade which are beyond the control of the managers. Based on the findings in this study, except for H_4, other hypotheses H_2, H_3, H_5 and H_6 are supported in this study.

The findings show that there is a strong relationship between board size (H_2) and performance indicators. A larger board size enhances firm value more than a smaller board size for ROA (p value = .0032***), ROE (p value = .0060***), EPS (p value = .0056***) and OCF (p value = .0043***). These findings are in line with previous empirical studies (Pearce & Zahra, 1989, Haleblian & Finkelstein, 1993; Haniffa &

Cooke, 2005; Goodstein et al., 2005; Sulong & Mat Nor, 2009). Malaysian companies are found to favour larger boards for various reasons such as more directors may increase the number of potential solution strategies, better judgement to correct the errors, increase the range of perspectives brought to solve problems (Haleblian & Finkelstein, 1993), and provide diversity that would help companies to secure critical resources (Haniffa & Cooke, 2005). Larger boards may provide an increased pool of expertise and better networking (Goodstein et al., 1994). The findings of the local study by Sulong and Mat Nor (2009) are also consistent with this study. Firms with smaller boards are associated with less efficient use of assets and lower firm valuation. Therefore, larger boards appear to be effective in their oversight duties relative to smaller boards. Larger boards are often believed to be more capable of monitoring the actions of top management, because it is more difficult for CEOs to dominate larger boards (Zahra & Pearce, 1989). The tendency to include former civil servants, retired army and police officers also increase the size of the board. Thus, hypothesis H_2 is supported.

Board independence (H_3) shows a negative value with ROA (p value = -.0281***), EPS (p value = -.0419***) and OCF (p value = -.0317***), but positively with ROE (p value = .0254**). The negative direction indicates that directors with greater independence do not actually enhance firm performance. The non-executive directors are not really independent enough to play a serious monitoring role. The results seem to indicate that they may not be of high enough calibre to contribute significantly to firm performance. The independent directors sit to fulfil the requirement made by the Code (2001), but might not be able to exercise their power. Boards dominated by non-executive directors

could create stifling strategic actions (Goodstein et al., 1994). Non-executive directors are obligated to the owner-manager and, therefore, not free of political pressure (Alderfer, 1988) and, over time, independent directors who have served for too long become less vigorous monitors (Bhagat & Black, 2002). It is also perceived that non-executive directors have less value as they are found to lack knowledge about the firm and its environment, they lack authority and a definable shareholder interest (Patton & Baker, 1987).

The analyses by Agrawal and Knoeker (1996), Hermalin and Weisbach (1991), and Franks et al. (2001) support the view that non-executive directors do not bring the requisite skills to the job and prefer to play a less confrontational monitoring role. Hence, when these factors exist in non-executive directors themselves, the firm value is affected. The findings from this study are consistent with other local studies. Sulong and Mat Nor (2009) found that independent non-executive directors still perform a weak governance function in Malaysia. Studies report that independent directors that stayed in a particular company for a very long time tend to develop a "buddy" relationship with management, and, therefore, it is difficult to retain their independent judgement of the company affairs (Meng, 2009).

However, when board independence is tested against ROE (p value = .0254**), the result is positive. It shows that a higher number of independent directors are able to increase the firm performance. This finding is consistent with previous studies (Rosenstein & Wyatt, 1990; Byrd & Hickman, 1992; Jackling & Johl, 2009; Ameer et al., 2010). Firm-boards

with a high representation of outside directors are associated with better performance compared to those firm-boards that have a majority of insider executive and affiliated non-executive directors (Ameer et al., 2010). Jackling and Johl (2009) evidence that a greater proportion of outside directors on board were associated with improved firm performance. The greater the proportion of non-executive directors the better the stock market's reaction to their firm's tender offers for other firms (Byrd & Hickman, 1992). Rosenstein and Wyatt (1990) evidence that stock prices increase about 0.2% when a company appoints an additional non-executive director. Therefore, based on the findings discussed above, hypothesis H_3 is supported in this study.

Directors with education background (H_4) were found to be negatively related to OCF (p value = -.0099*). This indicates that when there are more directors with a degree qualification sitting on the board, the lower the firm performance. The reason that this finding contradicts what was hypothesised may be due to the effect of the founders, who have no education qualification but are very influential and respected in the companies. Some of the founders in Malaysian family-companies migrated from China, India, Indonesia and other countries, and came to Malaysia to start their businesses. Therefore, this factor may influence the findings.

This study supports previous work (Srivastava & Lee, 2008) that found that directors' knowledge has a weak relationship with firm performance. Therefore, hypothesis H_4 is not supported. Further explanation is discussed in Section 5.6.2.1 (H_{4a}) and Section 5.6.3.1 (H_{4b}). When the data was split into family-controlled companies and non-family

controlled companies to look specifically at the effect of directors' degree qualification on firm performance, it was found that for family-controlled companies, directors with degree qualifications do not have any effect on firm performance. For non-family controlled companies, firm value is enhanced when the board consists of directors with a degree qualification. Additionally, further tests were conducted for all companies. Further analysis shows that the presence of founders (who are less academically qualified) influence company performance. This part is discussed later in sub-section 5.7.4.

Interestingly, when professional directors/experts (BEXP) was tested against firm performance, the results show a positive direction with ROA (p value = .0191***), ROE (p value = .0956***), EPS (p value = .0478**) and OCF (p value = .0216**). These results explain that experts are able to help boards make decisions and, thus, enhance firm value (Johannisson & Huse, 2000; Westphal & Milton, 2000; Fairchild & Li, 2005; Defond et al., 2005; Burak et al., 2008). Factors such as background, knowledge, competency, experience and the qualifications that the experts hold make them more beneficial than other directors. Directors' background and competency are essential factors, as they could contribute positively to the family firms (Johannisson & Huse, 2000). Thus, companies should look for superior quality directors to monitor management (Fairchild & Li, 2005). Directors that are experts with titles such as CA, CPA, CFA or a similar degree are competent and able to advise companies better in managing the business (Defond et al., 2005; Burak et al., 2008). Therefore, the suggestion by the Code (2001) is vital as it proves that directors with a professional

qualification may give added value to the companies, even though the ideas given are intangible and difficult to value. Hence, hypothesis H_5 is supported in this study.

Remarkably, companies that exercise a separate leadership (LSHIP) structure show lower firm value (Q with p value = -.0181***, OCF with p value = -.0019***). The reason why Malaysian companies prefer to have duality leadership may be due to the nature of the ownership structure in Malaysia. Most companies in Malaysia are highly concentrated and managed by family companies. Thus, by having duality leadership, the power and control are in the hands of the CEO/Chairman. Further, less agency costs are involved as less conflict arises, and the CEO/Chairman can focus on creating and generating the company's wealth. This finding is contradictory to the suggestion made by the Code (2001), which proposes that companies practise a separate leadership structure, as it enhances their corporate governance structure. However, this study found that duality leadership enhances greater firm value than a separate leadership structure. Therefore, this study supports previous works done by other researchers. Rechner and Dalton (1991) found that firms with the same CEO and Chairman have higher ROE, ROI and profit margins. Boyd (1994) claims that the role of duality could increase US firms' performance. This is because separate leadership dilutes the top management power and increases the probability of conflict between the board of directors and management (Anderson & Anthony, 1986; Alexander et al., 1993). According to Haniffa and Cooke (2000), the management of a firm will be more efficient with duality leadership because there is less bureaucracy and a decrease in information asymmetry. Thus, hypothesis H_6 is supported in this study.

5.6.1.3 The effect of managerial ownership on firm performance for all companies (H_7)

Managerial ownership (MOWN) is found to have a significant nonlinear relationship with firm performance, but with the opposite direction to that hypothesised in this study. From the analysis, managerial ownership shows a pattern of entrenchment-alignment-entrenchment (for performance indicators ROA, ROE, EPS and OCF). The findings indicate that managers tend to decrease their ownership when firms are performing well and likely to increase their ownership when firms are financially constrained (Fahlenbrach & Stulz, 2010). The findings from this study also supported the previous work by Ng (2005).

MOWN shows a negative direction with performance between the range of 0 to 27%. When managers own a smaller portion of the organisation's shares, they have greater incentive to pursue personal benefits and less incentive to maximize firm value (Mat Nor & Sulong, 2007). Then, when the managers are rewarded with more shares in the company, the results show a positive direction of $MOWN^2$ in the range of 27 to 67%. This finding is consistent with the alignment/convergence of interest hypothesis, as suggested by Jensen and Meckling (1976). They claim that an increase in the proportion of the firm's equity owned by insiders is expected to increase firm value, as the internal and external interest are realigned, thus, resulting in less conflict among the shareholders. This explains that when more shares are in the hands of managerial directors, the directors have higher motivation and feel that they are part of the company. Hence, the

value of the company increases. However, as the shareholdings keep increasing ($MOWN^3$) beyond 67%, the company's performance declines. At this stage, managers have greater control of the company, which can discourage them from maximising the company's profits on behalf of the shareholders at large. Too much managerial ownership could lead managers to worry more about their interests and decrease company performance (Mandaci & Gumus, 2010).

Perhaps, the results are not surprising in a Malaysian setting because it is well known that most companies in Malaysia are family-owned or controlled companies. The tendency for the companies to be driven by family ownership style (entrenchment-alignment-entrenchment) is high. The results in this study are unique, and apply mostly to Asian countries like the study done by Ng (2005) in Hong Kong. Managerial ownership in Malaysia is found to be influenced by who controls and manages the companies. Further, with a high ownership concentration, as compared to the dispersed ownership in Western countries, this finding shows that the managerial ownership structure in Malaysia is different from the Western studies. Thus, hypothesis H_7 is not supported in this study.

5.6.1.4 The effect of control variables on firm performance

The findings from this study reveals that debt (DEBT) is positively related to Q (Welch, 2003; Myers, 1984; Myers & Majluf, 1984), but shows a negative direction with ROA (Harris & Raviv, 1991; Jensen, 1986). Company debt provides a measure of monitoring that reduces the need for additional monitoring provided by concentrated ownership

(Welch, 2003). Further, due to asymmetric information and signalling problems in getting the external funds, companies finance their firms through debt over equity (Myers, 1984; Myers & Majluf, 1984). Debt may also reduce agency costs by reducing the cash flows available for expropriation of negative net present value projects (Harris & Raviv, 1991; Jensen, 1986). For firm size (FSIZE), it was found that Q has a negative direction. While, other performance indicators ROA, ROE, EPS and OCF do show a positive sign with firm size. As expected, the larger the companies the greater the firm value generated from the business activities.

In terms of firm age (FAGE), it was found to be negatively related with company performance for ROA, ROE, EPS and OCF. Companies that stay longer in the market show a decreasing value of performance (Dunne & Hughes, 1994; Szulanski, 1996; Ward & Mendoza, 1996; Boeker 1997). Strong arguments support the view that, on average, older firms are more likely than younger firms to achieve lower performance (Dunne & Hughes, 1994). Firm age is expected to survive "only 5-10 years" (Ward & Mendoza, 1996). Older firms suffer from their routine jobs, non-learning processes, blindness, and conservatism, which cause poor performance and decline (Boeker 1997; Szulanski 1996). Industries on Bursa Malaysia were found to have a positive relationship with Q, ROA, EPS and OCF, except for ROE. This reflects that industries in Malaysia are sensitive to the performance of the companies. Previous studies have also found that some industries are relatively better than their counterparts (Haniffa & Hudaib, 2006).

5.6.1.5 Summary for GLS estimation for all companies

In summary, Equation 4.1 (for all companies), Model A and Model D indicate that the hypothesis variables are well explained and fit the models. The best model found in this study for all companies dataset is Model D with adjusted R^2 amounting to 15.64%. Meanwhile, the next best model is Model A, which shows an adjusted R^2 of 12.09%. Out of the seven hypotheses (H_1 to H_7), five hypotheses that are Family-controlled company (H_1), Board size (H_2), Board independence (H_3), Board expert (H_5) and Leadership structure (H_6) are supported by this study. The other two hypotheses, Board degree (H_4) and Managerial ownership (H_7) are not supported in this study. Further analyses below explain these inconsistencies.

5.6.2 GLS estimation of family-controlled companies: Board governance (H_{2a} to H_{6a}), family ownership (H_{7a}) and succession attributes (H_8 to H_{12}).

In this part, the discussion focuses on the family-controlled companies' sample. Sub-section 5.6.2.1 discusses board governance for family-controlled companies (H_{2a} to H_{6a}). Next, sub-section 5.6.2.2 highlights family managerial ownership (H_{7a}) and sub-section 5.6.2.3 focuses on succession attributes (H_8 to H_{12}).

Table 5.27

Regression results for GLS estimation for family-controlled companies

			Model A	Model B	Model C	Model D	Model E
	H	Expected sign	Q	ROA	ROE	EPS	OCF
BSIZE	H_{2a}	+/-	-.0018	.0028***	.0069***	.0051***	.0033***
BINED	H_{3a}	+/-	.0256*	-.0109	.0197	.0445*	-.0184*
BDEG	H_{4a}	+	-.0095	.0022	-.0138	.0214	.0082
BEXP	H_{5a}	+	.0138	.0127	.0136	.0789**	-.0024
LSHIP	H_{6a}	-	-.0090	-.0052	-.0005	-.0024	-.0163***
FOWN	H_{7a}	-	-.0023**	-.0038***	-.0048***	-.0041**	-.0031***
$FOWN^2$	H_{7a}	+	0001***	.0001***	.0002***	.0002***	.0001***
$FOWN^3$	H_{7a}	-	-8.18e-07***	-8.13e-07***	-1.22e-06***	-1.34e-06***	-6.55e-07***
CEO	H_8	+	.0805***	-.0030	.0065	.0299**	.0032
EDUC	H_9	+	.0035	.0090***	-.0062	.0153*	.0024
AGE	H_{10}	+/-	-.0006**	-.0000	-.0002	.0001	-.0000
GENDER	11	+/-	.0085	.0031	-.0118	.0147	-.0081
GEN	H_{12}	+	.0086	-.0097***	-.0139**	-.0028	-.0137***
DEBT		-	.0399**	-.0389**	-.1808***	-.0768	-.0306**

			Model A	Model B	Model C	Model D	Model E
	H	Expected sign	Q	ROA	ROE	EPS	OCF
FSIZE		+	-.01825***	.0076***	.0253***	.0453***	.0079***
FAGE		+	-.0008**	-.0002	-.0009***	.0004	-.0000
CP		+	.0449***	.0134***	.0042	.0358***	.0117*
IP		+	.0756***	.0162***	.0103	.0200*	.0162***
TS		+	.0463***	-.0017	-.0079	-.0135	-.0010
PROP		+	.1104***	.0002	-.0265***	-.0337**	-.0361***
OTHERS		+	.1469***	.0220***	-.0007	.0187	.0027
_CONS			.9406***	-.0534**	-.2600***	-.6394***	.0141
R^2:			29.6	12.39	24.35	26.15	12.83
Adj. R^2			24.83	12.02	2.59	20.97	10.42
F stats			14.96	5.64	3.63	12.2	5.91
P value			0.00	0.00	0.00	0.00	0.00

Table 5.27 presents the findings for the family-controlled companies' dataset. Of the variables hypothesised to be associated with firm performance, this study found that board size, board independence, directors' with professional qualification, leadership structure, family ownership, family CEO, CEO education, CEO age and family

generation are significant. Board size (H_{2a}), board expert (H_{5a}), leadership structure (H_{6a}), family ownership (H_{7a}), family CEO (H_8) and CEO education (H_9) are positively related with firm performance. While board independence (H_{3a}), CEO age (H_{10}) and family generation (H_{12}) reveal an opposite direction to what is predicted in this study. Other hypothesised variables, board degree (H_{4a}) and gender (H_{11}) are not significant. Thus, such results deserve further analysis.

5.6.2.1 The effect of board governance on family-controlled companies' performance (H_{2a} to H_{6a})

Next, this section discusses the results in Table 5.27, which specifically focus on the board governance attributes in family-controlled companies' with company performance. Board size (H_{2a}), board independence (H_{3a}), board expert (H_{5a}) and leadership structure (H_{6a}) are supported in this study, as the results are consistent with the prediction of this study. However, a director with degree qualification (H_{4a}) is not significant in this study.

It was found that for family-controlled companies, larger board size (H_{2a}) enhances family-controlled companies more than smaller board size for ROA (p value = .0028***), ROE (p value = .0069***), EPS (p value = .0051***) and OCF (p value = .0033***). These findings are consistent with the total sample and previous works (Pearce & Zahra, 1991; Haleblian & Finkelstein, 1993; Goodstein et al., 1994; Haniffa & Cooke, 2005; Sulong & Mat Nor, 2009). Larger boards are more capable of monitoring the actions of top management and it is more difficult for the CEOs to dominate larger boards (Zahra &

Pearce 1989), have a greater pool of expertise and a better networking with others (Goodstein et al., 1994). In terms of human resources, large boards offer a greater range of perspectives brought to solve the problems, increase the numbers of potential solution strategies and critical judgement to correct the errors (Haleblian & Finkelstein, 1993). In addition, Haniffa and Cooke (2005) argue that bigger boards may be constructive for some companies as they provide diversity that helps companies secure critical resources.

A local study by Sulong & Mat Nor (2009) argues that firms with smaller boards are associated with a less efficient use of assets and lower firm valuation. Therefore, it is relevant that larger boards appear to be effective in their oversight duties relative to smaller boards. Another explanation as to why Malaysian family-controlled companies have larger boards may be because of the reputation and practice of including a certain number of prominent Bumiputera as directors on the board. These Bumiputera directors tend to be from the royal families, politicians, civil servants and retired police or armed forces chiefs and, thus, make the board size larger. Therefore, hypothesis H_{2a} is supported.

This finding reveals that board independence (H_{3a}) enhances the family-controlled companies performance (Q with p value = .0256*, EPS with p value = .0445*). Further, this study is in line with past studies (Kosnik, 1987; Ward & Handy, 1988; Singh & Harianto, 1989; Rosenstein & Wyatt, 1990; Choi et al., 2007). Rosenstein and Wyatt (1990) evidence that stock prices increase when a company appoints an additional non-executive director. This indicates that non-executive directors show an independent role

and that they are able to exercise their roles and power in advising the board. Studies support that the introduction of independent directors into insider-dominant boards could also enhance firm performance (Choi et al., 2007). Ward and Handy (1988) found that boards with more non-executive directors are more useful and valuable compared to those using executive boards in expressing the same view. Another plausible explanation for this positive and significant result may be associated with the characteristics of the independent directors who are more likely to be objective and more capable of resisting self-interested efforts by executive directors to influence board decisions (Kosnik, 1987; Singh & Harianto, 1989).

On the other hand, when board independence is measured with OCF (p value = -.0814*), the results show a negative relationship. This suggests that the firm performance decreases when the OCF is used to proxy performance, even though with high number of independent directors on the board. In here, the firm is valued based on cash liquidity. The high number of independent directors on the board may be due to the independent directors having a personal relationship with the CEO. Independent directors who have served for too long, over time, become less vigorous monitors (Bhagat & Black, 2002). Sulong & Mat Nor (2009) found that independent non-executive directors still perform a weak governance function in Malaysia. Independent directors that stayed in a particular company for a very long time tend to develop a "buddy" relationship with management, and, thus, find it difficult to retain their independent judgement of company affairs (Meng, 2009). Although the results are mixed, the findings are consistent with the non-directional hypothesis. Thus, hypothesis H_{3a} is supported in this study.

The finding for directors with degree qualification (BDEG), hypothesis H_{4a} was found to be insignificant. There is no relationship between directors' education background and company performance for any of the tested indicators (Q, ROA, ROE, EPS and OCF). Perhaps, this is due to the effect of the founders. Further tests were conducted to exclude the founders, and the findings reveal that directors with degree qualification show a positive relationship with company performance for ROA (p value = .0130***), ROE (p value = .0.64***) and EPS (p value = .1011***). This explained that founders have a great influence on family-controlled companies decision making. For more details, the discussion is in sub-section 5.7.4.

Directors with professional qualification (H_{5a}) show a positive association with EPS (p value = .0789**), however, other performance indicators are not significant. In family-controlled companies, it was found that directors with a professional qualification enhance firm value. Experienced directors are more likely to contribute to board effectiveness (Westphal & Milton, 2000), and professional directors (experts) who are outsiders are more effective in monitoring the board and firm performance (Useem, 1993). Hence, hypothesis H_{5a} is supported in this study.

Family-controlled companies that practise duality leadership (H_{6a}) have a significant relationship with OCF (p value = -.061**). The findings in this study support previous researchers (Radice, 1971; Chen et al., 2005; Chang & Shazali, 2005; Sulong & Mat Nor, 2009). Duality leadership is a common practice in family firms despite the documented advantage of exercising a separate leadership structure (Chen et al., 2005). Radice (1971)

found that firms managed by the same owner-manager achieve higher profits than firms with separate control and ownership. A study by Donaldson and Davis (1991) found that the ROE for firms with duality leadership (14.8%) is higher than firms with separate leadership (11.5%).

The reason why family companies apply duality is because the CEO/Chairman can focus more on the company when the control and ownership is in the hands of one individual. Decision-making can be made faster without having to involve too many parties. In addition, the costs related to managing the businesses can be reduced with less conflicts taking place within the company. Family companies also feel more secure when most of the company information is not revealed to an outsider; the CEO/Chairman is more concerned about the survival of their firms and protects the legacy for future generations.

Local experts argue that separating the roles of the CEO and Chairman seems to be inapplicable to Malaysian listed firms and that duality is found to enhance the firm value (Chang & Shazali, 2005). A strong dominant CEO may be essential for a developing economy where the system may be dependent on a few powerful corporate players to push the firm performance (Sulong & Mat Nor, 2009). Therefore, in a developing country like Malaysia, duality may be more appropriate, especially for family-controlled companies. Therefore, hypothesis H_{6a} is supported in this study.

5.6.2.2 The effect of family managerial ownership on family-controlled companies performance (H_{7a})

From the analysis conducted in this study, the variables representing family managerial ownership (FOWN, $FOWN^2$ and $FOWN^3$) were measured using continuous variables (McConnell & Servaes, 1990). This study found that family ownership shows a nonlinear relationship with firm value as expected in this study. Therefore, H_{7a} is supported.

In this study, it is evidenced that at a low level of family ownership (0% to 15%), firm value decreases. Then, when family managers own around 15% to 49% of the ownership, firm performance is enhanced. However, beyond 49%, as family managerial ownership increases, the firm value starts to fall again. Therefore, the entrenchment-alignment-entrenchment pattern exists in Malaysian family-controlled companies. The relation between Malaysian family holdings and firm performance is not uniform over the entire range of family ownership. These findings do support previous works (Yeh et al., 2001; Ng, 2005; Achmad, 2010), but contradict studies conducted in Western countries. These findings confirm that research based in the UK and US are not applicable to East-Asian companies due to differences in ownership concentration.

The findings from this study are similar to past studies done in Taiwan, Hong Kong and Indonesia. In Indonesia, most companies are highly concentrated. The high family concentration has lowered the corporate performance. Family companies tend to expropriate the wealth from the non-family shareholders (Achmad, 2010). In a Taiwan

study, findings reveal that when family ownership is weak, the performance of family-control is low. A family only needs 15% equity in a listed firm to control the firm effectively. Thus, the effective ways of mitigating the ownership problem is when the family ownership is high but with low family representation on the board. In this way, the conflict of interest between majority and minority shareholders can be minimized (Yeh et al., 2001).

In the Hong Kong scenario, studies reveal that in a low level of ownership, managers entrench their interest with the companies. At medium levels of ownership (approximately between 17% and 63%), family managers align their interests with the companies, and firm performance improves with ownership concentration. However, at high levels of ownership, family management entrenches their interests with the companies when they find that they have sufficient control in the companies and that they can benefit more by expropriating the minority shareholders. However, if the family ownership can be controlled and made use of appropriately, firm performance can be optimized (Ng, 2005). Further, by having high family ownership in the company, the influence of the family can be preserved (Anderson & Reeb, 2003). Therefore, based on the findings in this study, hypothesis H_{7a} is supported.

5.6.2.3 The effect of succession attributes on family-controlled companies performance (H_8 to H_{12})

In terms of succession attributes, family CEO (H_8) shows higher firm performance when measured using Q (p value = .0805***) and EPS (p value = .0299**). Family managers work hard for the family company because the company is part of the family affairs and usually the CEO plans to pass the company to the next generation. Owner-managed firms achieve higher profit (ROE) than professionally managed firms (Monsen et al., 1968). Previous work by Anderson and Reeb (2003) evidenced that family firms have a higher Tobin's Q and ROA when family members serve as the CEO rather than an outside CEO.

Another argument is that the agency costs are significantly higher when outsiders manage the firms (Ang et al., 2000). Family directors mostly spend their working lives in the firm they govern, therefore, they understand the firms better than outside directors and are able to make superior decisions (Donaldson & Davis, 1991, 1994). Next, Daily and Dollinger (1992) reveal that even though family-owned firms are smaller and use less aggressive strategies, they achieve a higher performance than professionally managed firms. Hence, the findings in this study support hypothesis H_8.

Education of the CEO (H_9) was found to have a positive relationship with firm performance when measured using ROA (p value = .0090***) and EPS (p value = .0153*). This shows that CEO education background influences firm performance. Educated CEOs have an advantage in managing the companies, as they may have been

exposed to some basic techniques while at university (Ibrahim & Ellis, 1994; Goldberg, 1996; Sebora & Wakefield, 1998; Castillo & Wakefield, 2006). Today, owners need to consider the suitability of the successor, particularly the level of education that the successor possesses in managing family firms (Ibrahim & Ellis, 1994). Family firms need to change and send their children to college because it helps them to manage businesses systematically and enables them to prepare for good succession. In the US, an increasing number of young people are earning college degrees, and youngsters are opting for college instead of several years of experience working with someone else. The owners of family companies are also encouraged to send their sons and daughters for skills training ahead of other staff (Goldberg, 1996). Furthermore, when the CEOs have a higher education level, they tend to be more creative and innovative in managing the businesses. Thus, H_9 is supported in this study.

CEO age (H_{10}) is only significant with Q (p value = -.0006**). Results show that younger CEOs enhance firm value more than older CEOs. From previous studies, young CEOs are argued to be more willing to take the risk and to change (Wiersema & Bantel, 1992), pursue more risky and innovative growth strategies (Guthrie & Olian, 1991) and handle new and creative ideas better than older managers (Campbell et al., 1996). Thus, the characteristics possessed by the young CEOs push the family companies to be better. Therefore, H_{10} is supported in this study.

CEO gender (H_{11}) is not significant with company performance for any of the firm indicators. The results reveal that there is no relationship between male CEO and

company performance. Therefore, further analysis was conducted in sub-section 5.7.10. Results from further testing show that male-successor and female-founder enhanced company performance more than male-founder and female-successor. Therefore, gender is actually one of the important elements that determine the success or failure of family companies' performance.

Family generation (H_{12}) resulted in an inverse relationship with ROA (p value = -.097***), ROE (p value = -.0139**) and OCF (p value = -.0137***). Second family generation or successor is found to have higher firm performance than the founder or first generation. The findings are justified by explaining that the descendant-controlled firms generate more profit because of the experience gained from the founder (McConaughy & Philips, 1999). Perhaps, after a few generations, the company performance may decline for family-controlled companies. Hence, H_{12} is not supported in this study.

5.6.2.4 The effect of control variables on family-controlled companies' performance

In terms of control variables, debt is negatively related to ROA, ROE and OCF, but positive with Q. The results show mixed findings. On one side, family-controlled companies use more debt to manage the firm, which benefits the companies. When measured using Q, debt improved the business performance. Family companies usually face problems in obtaining external funds, therefore, companies finance their firms through debt rather than equity (Myers, 1984; Myers & Majluf, 1984). In contrast, there is a negative relationship between debt and firm performance when measured using

ROA, ROE and OCF. Managerial insiders are reluctant to use the optimal amount of debt financing for the organization because there is an additional bankruptcy risk associated with the higher level of debt engendered (Fosberg, 2004). Therefore, due to insufficient capital to run the business, it may affect the firm performance.

Firm size was found to be positively related with all performance indicators except Q. This shows that larger companies are able to generate more profit than smaller companies (Trow, 1961; Helmich, 1977; Chaganti et al., 1991). When firm size is large, family businesses have greater opportunity to train and develop top management (Helmich, 1977), have more training programmes and complex succession plans (Trow, 1961), as well as greater resources to engage external consultants advice to facilitate the succession planning process (Chaganti et al., 1991). Thus, company performance increases. However, not with Q. Large firm size shows a decreasing company performance. When a firm needs to expand, but the family management team is reluctant to raise external funds because they fear losing family control (Church, 1993), the firm value starts to decrease.

Firm age was found to be negatively related with Q (p value = -.008**) and ROE (p value = -.009***). These findings indicate that as the family-controlled companies become more mature in the market, the firm value decreases. On average, older firms are more likely than younger firms to achieve a lower performance (Dunne & Hughes, 1994). Older firms suffer from their routine works, non-learning processes, blindness, and conservatism, which cause poor performance and decline (Boeker 1997; Szulanski 1996).

For family-controlled companies, it is found that industries on Bursa Malaysia are positively related with firm performance for all performance indicators, except for property that shows mixed results. Therefore, industries are also sensitive to company performance indicators.

5.6.2.5 Summary for GLS estimation for family-controlled companies

In sum, Model A (Q is used as the performance indicator) best explains the hypotheses variables for family-controlled companies with adjusted R^2 = 24.83%. The next best model is Model D (EPS as the performance indicator) with adjusted R^2 = 20.97%. From the 11 hypotheses tested in this section, Board size (H_{2a}), Board expert (H_{5a}), Leadership (H_{6a}), Family managerial ownership (H_{7a}), CEO family (H_8), CEO education (H_9) and CEO age (H_{10}) are supported in this study. Other hypotheses, Board independence (H_{3a}), Directors with education background (H_{4a}), Gender (H_{11}) and Family generation (H_{12}) are not supported in this study.

5.6.3 GLS estimation for non-family controlled companies: Board governance (H_{2b} to H_{6b}) and non-family ownership (H_{7b})

In this section, the analyses focus on the non-family companies only. Sub-section 5.6.3.1 discusses board governance for non-family controlled companies (H_{2b} to H_{6b}). Next, sub-section 5.6.3.2 explains non-family managerial ownership (H_{7b}) with company performance.

Table 5.28

Regression results for GLS estimation for non-family controlled companies

			Model A	Model B	Model C	Model D	Model E
	H	Expected sign	Q	ROA	ROE	EPS	OCF
BSIZE	H_{2b}	+	.0029*	.0061**	.0105	.0048	.0069***
BINED	H_{3b}	+	-.0116	-.0736**	-.1431	-.1176	-.0742**
BDEG	H_{4b}	+	.0603***	-.01606	.0359	-.0538	-.0259
BEXP	H_{5b}	+	.0464	.0552	.2522**	.0703	.0862**
LSHIP	H_{6b}	+	-.0467***	.0124	.0263	-.0257	.0142
NFOWN	H_{7b}	+	.0010	-.0019	-.0094	-.0027	-.0022
$NFOWN^2$	H_{7b}	-	-.0000	.0001	.0004	.0000	.0001
$NFOWN^3$	H_{7b}	+	2.15e-07	-7.28e-07	-3.68e-06	1.25e-07	-4.99e-07
DEBT		-	.0352*	-.0176	-.4145***	.0689	.0211
FSIZE		+	-.0173***	.0236***	.0244*	.0901***	.0226***
FAGE		+	.0003	-.0002	-.0013	-.0009	-.0006
CP		+	.1022***	.0438*	-.1240	.0534	.0612**
IP		+	.1436***	0414*	-.0996	.0511	.0719***

			Model A	Model B	Model C	Model D	Model E
	H	**Expected sign**	**Q**	**ROA**	**ROE**	**EPS**	**OCF**
TS		+	.12962***	.0253	-.1002	-.0073	.0561**
PROP		+	.1026***	.0254	-.1250	-.0305	.0202
OTHERS		+	.1113***	.0469*	-.0684	.0685	.0721***
_CONS			.8502***	-.3488***	-.2646	-.9936***	-.3003***
R^2			15.55	22.13	5.39	25.39	23.64
Adj. R^2			12.6	9.51	1.57	15.08	11.46
F stats			11.43	8.6	2.15	13.84	12.63
P value			0.00	0.00	0.00	0.00	0.00

Table 5.28 presents the results for non-family controlled companies with firm performance. The hypotheses variables that are significantly related with performance are board size (H_{2b}), board independence (H_{3b}), directors with education background (H_{4b}), directors with professional qualification (H_{5b}) and leadership structure (H_{6b}), but not with non-family managerial ownership (H_{7b}). Further findings show that H_{2b}, H_{4b}, and H_{5b} are supported in this study. Other hypotheses, H_{3b}, H_{6b} and H_{7b} are not supported in this study.

5.6.3.1 The effect of board governance on non-family controlled companies' performance (H_{2b} to H_{6b})

With reference to Table 5.28, board size, board independence, directors with education background, board expert and leadership structure are found to significantly influence firm performance. Board size (H_{2b}), directors with education background (H_{4b}) and board expert (H_{5b}) show a positive direction with firm performance, and are supported in this study, while board independence (H_{3b}) and leadership structure (H_{6b}) show a negative relationship with firm performance. Therefore, H_{3b} and H_{6b} are significant but in the opposite direction. For non-family managerial ownership (H_{7b}), the results did not identify any significant relationship with firm performance.

In the non-family controlled companies, board size (H_{2b}) is positively related with Q (p value = .0029*), ROA (p value = .0061**) and OCF (p value = .0069***). The results are in the same direction as the sample findings for all companies. Further, these findings are consistent with past works (Pearce & Zahra, 1989, 1991; Haleblian & Finkelstein, 1993; Haniffa & Cooke, 2005; Sulong & Mat Nor, 2009). Non-family controlled companies were found to practise using large boards to enhance firm value. The advantages of having a large board are that there is a pool of expertise and better networking (Goodstein et al., 1994), it provides diversity that helps companies secure critical resources (Haniffa & Cooke, 2005) and is more capable of monitoring the actions of top management (Zahra & Pearce, 1989).

Further, research recommends that large boards are particularly effective because they increase the range of perspectives brought to solve problems (Haleblian & Finkelstein, 1993), they provide counsel and advice regarding the strategic options of the firm, have more capabilities and resources to solve group tasks and they have more external contracting relationships (Pearce & Zahra, 1991). Sulong & Mat Nor (2009) claim that larger boards appear to be effective in their oversight duties relative to smaller boards. Therefore, hypothesis H_{2b} is supported.

Board independence (H_{3b}) is found to negatively influence the ROA (p value = -.0736**) and OCF (-.0742**). This explains that even though there is an increase in independent directors on the board, they are unable to exercise their power in advising the board (Alderfer, 1988; Goodstein et al., 1994; Sulong & Mat Nor, 2009; Meng, 2009). In fact, for non-family controlled companies, the directors should be more independent because there is no family influence inside the board. However, the findings in this study contradict what has been hypothesised. It is argued that boards dominated by non-executive directors create stifling strategic actions (Goodstein et al., 1994) and that non-executive directors are obligated to the owner-manager and, therefore, are not free of political pressure (Alderfer, 1988).

In addition, boards in Malaysia usually consist of prominent and influential figures sitting on the board. Sometimes, the selection of the directors is biased because firms prefer 'the old boys network' or choose their close friends to be on the board. Therefore, an independence problem arises. These groups of directors have less incentive to work for

the companies and their presence is used as a network to obtain business contracts. Therefore, their presence may not influence the company performance.

Furthermore, the structure of concentrated ownership also tends to make the independent directors less independent. This is because the substantial shareholders have a powerful and strong say in the company. Therefore, the independent non-executive directors cannot exercise their roles. Further, some of the directors appointed to hold the post are not actually aware of what the role of independent non-executive director entails. Consequently, these directors are unable to play their roles. Some of the independent non-executive directors are not expert and they have no feel for business activities. Therefore, the presence of a higher number of independent non-executive directors could destroy the company performance. Hence, hypothesis H_{3b} is not supported in this study.

Directors with a degree qualification (H_{4b}) were found to influence Q (p value = .0603***) positively. Empirical study evidences that individuals with education exposure are better in managing the conflict over money, management control and strategic vision. They are better at handling problems and situations that may arise in the firms. Thus, companies have a greater advantage when they have educated directors on the board (Sebora & Wakefield, 1998). Thus, hypothesis H_{4b} is supported.

Directors with a professional qualification (H_{5b}) is found to enhance company performance, using ROE (p value = .2522**) and OCF (p value = .0862**). The results show that professional directors' experience, knowledge and skills contribute positively

to firm performance. Experienced directors also contribute to board effectiveness (Westphal & Mitton, 2002) and the professionals are more effective as a monitoring mechanism for companies (Useem, 1993). Therefore, hypothesis H_{5b} is supported.

Interestingly, the findings show that non-family controlled companies practising duality leadership (H_{6b}) enhance Q (p value = -.0467***) compared to separate leadership (Radice, 1971; Anderson & Anthony, 1986; Rechner & Dalton, 1991; Alexander et al., 1993; Boyd, 1994; Haniffa & Cooke, 2000; Chang & Shazali, 2005; Abdul Samad et al., 2008; Sulong & Mat Nor, 2009). These findings are in line with findings for all companies and family-controlled companies results. Firms managed by the same owner-manager achieve higher profits than firms with separate control and ownership (Radice, 1971; Rechner & Dalton, 1991). The management of a firm will be more efficient with duality leadership because there is less bureaucracy and a decrease in information asymmetry (Haniffa & Cooke, 2000). There are arguments that separate leadership dilutes the top management power and increases the probability of conflict between the board of directors and management (Anderson & Anthony, 1986; Alexander et al., 1993).

In the local context, experts argue that separating the roles of the CEO and Chairman positions seems to be inappropriate for Malaysian listed firms (Chang & Shazali, 2005). A strong dominant CEO may be essential for a developing economy where the system may be dependent on a few powerful corporate players to push the firm performance (Sulong & Mat Nor, 2009). Abdul Samad et al. (2008) agreed with Chang and Sazali

(2005) who determined that non-family firms gain more profitability when duality exists on the board. Therefore, hypothesis H_{6b} is not supported.

5.6.3.2 The effect of non-family managerial ownership on non-family controlled companies performance (H_{7b})

The analysis reveals that non-family managerial ownership (NFOWN, $NFOWN^2$ and $NFOWN^3$) does not influence firm performance. The study failed to find any relationship between non-family managerial ownership and firm performance, even though the direction is what was predicted in the hypothesis. Therefore, H_{7c} is not supported. Again, the nature of ownership (i.e. high concentration) and the non-family substantial shareholders could influence the results. Further analysis is discussed in Sub-section 5.7.11 looking at the effect of non-family substantial shareholders. Results show that non-family substantial shareholders influence the performance of non-family controlled companies. This is because when some non-family substantial shareholders own a significant amount of shares in the company, these non-family substantial shareholders have power and control to influence the company performance.

5.6.3.3 The effect of control variables on non-family controlled companies' performance

Debt has shown a mixed direction with performance. It is positively related with Q (p value = .0352*), but negatively related with ROE (p value = -.4145***). Debt is one of the ways for non-family companies to raise their capital. Usually managerial insiders are reluctant to use the optimal amount of debt financing for the organization because of high bankruptcy risk (Fosberg, 2004). Therefore, managers will not issue the optimal amount of debt without pressure from a disciplining force (Jensen, 1986). Being in debt may cause companies to suffer through having to pay for the debt. Therefore, it may also cause the company performance to decline.

Firm size also reveals mixed results. ROA (p value = .0236***), ROE (p value = .0244*), EPS (p value = .0901***) and OCF (p value = .0226***) show a positive direction with firm size, but not for Q (p value = -.0173***). As expected large companies could generate more profits, thus, company performance is enhanced. However, large firm size could destroy the company's performance when the companies become too large and are unmanageable by the board. Therefore, company performance declines.

In terms of industry, this study found that all industries show a positive direction with company performance. Therefore, each industry is sensitive and capable of influencing firm value (Haniffa & Hudaib, 2006; Tam & Tan, 2007).

5.6.3.4 Summary of GLS estimation for non-family controlled companies

In sum, for Equation 4.3 for non-family controlled companies, the models that best explain variables in this study are Model D (with adjusted R^2 = 15.08%) and Model A (with adjusted R^2 = 12.6%). From seven hypotheses tested in this part, hypothesis Board size (H_{2b}), Board degree (H_{4b}) and Board expert (H_{5b}) are supported in this study. Other hypotheses, Board independence (H_{3b}), Leadership structure (H_{6b}) and Non-family managerial ownership (H_{7b}) are not supported in this study.

5.7 Further tests

This study also conducted further tests to examine whether the main results (all companies, family-controlled companies and non-family controlled companies) were sensitive to different sub-samples and different measurements. First, using all companies, family-controlled and non-family controlled, the sample was splitted into the Main Board and Second Board to examine the board effect and firm performance. Next, different measurements were used for some hypotheses variables to obtain clearer results and to confirm the main findings being made. In addition, some of the variables are dropped from the study to look for the effect on the main findings. In this way, the additional tests were conducted to obtain a richer explanation and ensure the robustness of the results in achieving consistent findings. The summary of hypotheses and results are shown in the Appendix B.

5.7.1 GLS for Equation 4.1-All companies (Main board and Second board)

The all companies dataset was split into type of board (main board and second board, refer to Appendix C). The results show consistency with the main findings (in Table 5.26) for all the hypotheses in the main board and partly for the second board. Family-controlled companies are significant with all company performance indicators (Q, ROA, ROE, EPS and OCF) for the main board only. This shows that family businesses in the main board contribute greatly to the Malaysian economy by boosting the markets on Bursa Malaysia. Therefore, it is true that family companies help to generate the Malaysian economy. For board size, it was found that large board size in the main board and second board enhance company performance. Therefore, these findings confirm the main findings for hypothesis H_2 that Malaysian companies with larger board size tend to have better company performance.

In terms of board independence, the main model reveals mixed results. However, when the companies were split, the main board companies were found to be negatively related with performance and the second board was not significant at all. From the findings, a higher number of independent directors does not ensure that the company performance will improve. However, what is important is how the independent directors' work and influence the board of directors. The second board companies are not significant with company performance, which may be because these companies are family companies with small business size. Therefore, the independent non-executive directors are not significant with company performance because it is the owners that determine the

company success. Overall, these findings confirm the main findings that the independent non-executive directors' roles are still weak in the Malaysian setting. Independent directors are unable to exercise the roles and power, so action is needed to ensure that these directors are truly 'independent', as stated by the Code (2001).

In terms of directors with degree, the main board companies are positively related with performance, however, the second board shows a negative direction. For the main board, the indicators that are significant are ROA (p value = .0089) and OCF (p value =.0124*). Main board companies need to have directors that are educated because they are presumed to have wider knowledge, experience, skills and are able to advise the management. As main board companies, these companies are able to recruit educated directors and these directors need to be paid higher remuneration compared to other directors. These directors may provide benefit to the firm and contribute to better firm performance. For the second board, it was found that directors with a degree qualification decrease the value of the firm for ROA (p value = -.0387***) and OCF (p value = -.0495***). It may be argued perhaps, that there are few educated directors on the second board due to financial constraints or that although there are directors with a degree, they are unable to convince and advise management effectively. About 45.77% of the second board companies are family-controlled companies (refer to Table 5.3).

The findings for directors with a professional qualification (experts) show that the main board and second board confirm that the skills and experiences of the experts actually enhance firm performance. The company indicators for the main board companies (ROE

with p value = .1547***) and second board companies (ROA with p value = .0542* and OCF with p value = .0479*) reveal a positive direction between board expert and firm value. Thus, these findings are consistent with the main findings that professional directors (experts) enhance company performance. The results for leadership structure are consistent with the main findings, which is that duality leadership contributes to greater firm performance for main board companies. Leadership structure was negatively related with Q (p value = -.0162***) and OCF (p value = -.0092**).

In the main model, managerial ownership shows a nonlinear pattern (entrenchment-alignment-entrenchment). Further, when the data was split, the results were consistent with the main model. It was found that managerial ownership in the main board companies show a nonlinear pattern (for EPS), however, it was not significant for the second board companies. The findings indicate that 42.94% of main board companies (refer to Table 5.3) consist of family companies and these companies may influence company performance. This confirms that managerial ownership in Malaysia is unique with a greater inclination towards family ownership structure, and not similar to that claimed in the Western studies.

5.7.2 GLS for Equation 4.2-Family controlled companies (Main board and Second board)

When the sample of family-controlled companies is split into main board and second board (refer to Appendix D), the hypotheses variables support the main findings in Table

5.27. For board size, both main and second board show that higher board size contributes to better company performance. Board independence for main board and second board also reveals mixed results, as in the main findings. Therefore, the results confirm that board independence is still weak in exercising their roles for both the main and second boards. Board degree was found to be insignificant in the main model. When the data was split, the results show that board degree in the main board and second board companies are not significant with firm performance. Possibly, this may be due to the effect of the founders influencing the results to be insignificant.

Directors' with professional qualification (experts) is positively related with company performance for the main board, but not for the second board. This indicates that main board companies need the help of directors with professional qualifications to enhance performance. Leadership structure was found to be significant in the main board companies with company performance, but not for the second board. It was found that main board companies that practise duality leadership have better firm performance. Thus, it is consistent with the main findings. In terms of family ownership, only main board companies show significant results with company performance for all company indicators, but not for second board. These findings further explain the main findings that most of the main board companies are family companies and that these companies do contribute to company performance.

In terms of CEO role, it was found that main board (Q and EPS) and second board (ROA and EPS) companies' family CEOs enhanced firm performance. These findings further affirm the main findings that family CEOs contribute greatly to company performance. Education background of the CEO influences the business performance for the main board, but there is no effect for the second board. Main board companies need educated CEOs because a significant amount of capital is invested into businesses, therefore, companies need to generate profits and distribute the returns back to shareholders. The justification for the second board might be because the second board comprises small companies and the education background of the CEO is not crucial. Thus, these findings further elaborate the main findings.

CEO age shows a negative relationship for main board and second board family-controlled companies. These findings confirm the main model results that young CEOs enhance greater firm performance than mature CEOs. Gender was not significant in the main analysis, however, when split into main board and second board it was found that second board family-controlled companies show a positive relationship with company performance. This shows that male CEOs play a greater role in running the second board companies, as these companies are usually new companies. Male CEOs are claimed to be more aggressive, consequently, they can grab more business opportunities, and have a greater impact on firm performance. Therefore, these findings further explain the main findings.

Next, first family generation was found to have higher firm performance than second family generation, for main board companies only. The reason being that as the founders have invested a huge amount of money to build the company, they want to make sure that the family empires will last for the next generation. Thus, with business plans and strategies, family companies slowly capture the market. Therefore, it is possible that firm value is enhanced. For the second board, with small business and newly formed business, the companies still have a long way to go to capture the market. That is why the second board companies are not significantly affected by company performance.

5.7.3 GLS for Equation 4.3-Non-family controlled companies (Main board and Second board)

Equation 4.3 for non-family controlled companies (refer to Appendix E) found that all hypotheses variables support the main results. Board size in the main and second board shows a positive direction with company performance. Main and second board companies with large board size enhance board performance. Therefore, it supports the main findings tested before. Next, higher numbers of independent non-executive directors do not actually enhance firm performance, for main and second board companies. Therefore, these findings are in line with the main testing. Directors with a degree qualification are found to enhance main board performance, however, for the second board, the results are mixed.

Educated directors are needed to help in managing main board companies with huge capital, but are not highly demanded for the second board. Financial constraints might also influence why the second board may or may not favour educated directors.

The main board reveals that board experts are significant with performance. This is because professional directors are able to contribute and advise the board, thus, it influences the company performance. However, for the second board, the experts have no effect on firm performance. Leadership structure shows a negative direction with performance for main and second board companies. Dual leadership enhances performance because the power and control are in the hands of one individual, thereby facilitating easier and faster decision making. Thus, these findings are consistent with the main findings.

5.7.4 Sensitivity analysis for directors' education

The sensitivity test was conducted to confirm the findings of H_4. The founders were excluded from the sample. This test is to determine whether the founders have any effect on the company performance (refer to Appendix F). As expected, when the founders were dropped from the sample, the findings show that there is a positive relationship between directors with an education background and company performance. The results are significant for ROA (p value = .0130***), ROE (p value = .0364***) and EPS (p value = .1011***). These findings explain that founders have a strong influence on company performance. Founders are individuals that are respected because they have

experience, are senior in age and act as the reference among the board members. However, their opinions might not be correct and could affect firm performance. Therefore, these findings support the theory and literature that claim that education is vital for companies to be better managed, and to enhance company performance. For the detailed results, see Appendix F.

5.7.5 Sensitivity of proxy for independent director's expertise

Equation 4.1 tested board expert as the percentage of directors with a professional qualification over the total board. In the sensitivity test (refer to Appendix G), board expert was redefined as the percentage of independent directors with a professional qualification (IEXP) over board size. Equation 4.1 reveals that when the criteria 'independent' board expert is considered, it is found that IEXP show positive relationship for all companies, family-controlled and non-family controlled companies. In all companies sample, ROE shows a p value = .0216**. For family-controlled companies, the significant performance indicators are ROA (p value = .0032**), ROE (p value =.0054*) and EPS (p value =.0084*). In non-family controlled companies, the results show that ROA (p value =.0024*), ROE (p value = .0048*) and OCF (p value = .0036**) are significant. The findings show that when the 'independent' element is considered in professional expert, the company performance is better enhanced. This is because beside holding the professional title and wide working experience, these directors are more independent and less likely to be influenced by other board members in advising the management.

5.7.6 Sensitivity of proxy for managerial ownership

The proxy use for managerial ownership (MOWN) is defined as the percentage of executive directors' over total shareholdings. For further testing (refer to Appendix H), Equation 4.1 was re-estimated using the definition of both executive and non-executive directors' shareholdings (MGROWN). From the analysis carried out, only ROE is significant for MGROWN (p value = .5853***), $MGROWN^2$ (p value = -1.4719***) and $MGROWN^3$ (p value = 1.1836***). The direction shown by the findings supports the alignment-entrenchment-alignment hypothesis, whereby the alignment of interest occurs at a low level of managerial ownership with entrenchment taking place at high levels of ownership. Perhaps, the definition of managerial ownership in the study should include non-executive directors (NEDs) due to the unique Malaysian environment whereby Ned might still be related to EDs or owners.

From the analysis, the study found that 51 companies (27.87%) out of 183 family-controlled companies in the sample shows relationship between the NEDs and the family members (for more details refer to Appendix Q). For example, in the EUPE Corporation Bhd, Datin Teoh Choon Boay (wife of the founder Dato' Beh Heng Seong) is the Non-Executive Director, but owned substantial shareholdings of 38.67% for the years 2003 to 2007.

5.7.7 Sensitivity analysis for firm size

A further test was conducted by dropping the firm size variable. The analysis in Appendix I, Panel A (for all companies) shows that when firm size was dropped from the analysis, the results were consistent with the main model (Equation 4.1). For Panel B (family-controlled companies), the findings also support the main findings in Equation 4.2 except for CEO gender (GENDER). In the main findings, GENDER was not significant with company performance. However, when firm size was dropped, female CEO was found to enhance firm value better when measured using Q (p value = -.0009***). In Panel C (non-family controlled companies), the findings support the main Equation 4.3 results. Therefore, the findings in this study are not affected by firm size, thus, the results are consistent and robust.

5.7.8 Sensitivity analysis for industries

A sensitivity test was conducted to examine if there is any industry effect on firm performance (refer to Appendix J). For Panel A (all companies), the findings were consistent with the main findings in Equation 4.1, except for MOWN. MOWN shows a nonlinear relationship (alignment-entrenchment-alignment) with ROE. This indicates that industries might affect the main findings results. Looking at Panel B (family-controlled companies), the results are consistent with the main findings in Equation 4.2, except that BEXP and CEO show mixed findings. While Panel C (non-family controlled companies)

results support the main findings in Equation 4.3. Overall, these tests reconfirm the main findings conducted in the earlier part.

5.7.9 Sensitivity analysis for family CEO

From the main analysis, family CEO (H_8) was found to enhance firm performance greater than professional (outsider) CEO. In this part, further testing focuses on the family CEO sample only. Family CEO is divided into two groups – whether the CEO is in the first generation (founder) or second family generation (successor) – and it is regressed with company performance. From the analysis conducted (refer to Appendix K), it was found that founder CEO only enhances performance when Q (p value = .0143*) is used. On the other hand, founder CEO has a negative relationship between family CEO and ROA (p value = -.0090***), ROE (p value = -.0133**) and OCF (p value = -.0153***). This explains that when the successor is the CEO, the firm value is enhanced more than when the founder is the CEO. This shows that CEO successor generates higher company performance. The characteristics such as risk taker, aggressive, innovative and energetic help the successors to contribute more to company performance. Thus, the analyses in this part further enrich the main findings.

5.7.10 Sensitivity analysis for gender

The main findings reveal that there is no relationship between male CEOs and company performance (H_{11}). However, additional testing was conducted to explore further. Gender

was split into female and male (refer to Appendix L). The next step is that male and female are further classified based on the first generation (founder) or second generation (successor), and regressed with company performance. From the results, findings reveal that male successor enhances firm value more than male founder for ROA (p value = -.0127***), ROE (p value = -.0173**), EPS (p value = -.0171*) and OCF (p value = -.0181***). One of the reason is that majority of the sample consists of male, 565 male founders (65.1%) and 303 male successors (34.9%). The total are 47 females, with 21 female founders (44.68%) and 26 female successors (55.32%). Further, the male successors are more energetic, risk takers and grasp the opportunities that arise to ensure that the firm value is enhanced. Interestingly, it was also found that firm value increases when the female founder runs the business. Thus, firm value increases when female founder runs the businesses when using ROA (p value = 2.0819***), ROE (p value = 2.9437***), EPS (p value = 1.6592***) and OCF (p value = 2.3970***). Female founders were found to be more hardworking, able to grasp business opportunities, forward plan to enhance the firm value and show that they are able to increase the firm performance better than young female CEOs.

5.7.11 Sensitivity analysis for non-family ownership

In the main test, non-family managerial ownership was found to be insignificant. Therefore, to investigate further, this test examines the presence of substantial shareholders (refer Appendix M). Substantial shareholder is redefined as non-family ownership from all shares owned by non-family executive directors from all shares above

5% owned by non-family executive directors. The mean for non-family executive directors own above 5% is 19.58%. It is expected that these substantial shareholders would influence the company performance due to their significant shareholding (interests) in the company. From the findings, the results show that substantial shareholders do influence company performance for ROA (p value = .0004***, ROE (p value = .0006***), EPS (p value = .0003***) and OCF (p value = .0006***). Therefore, substantial shareholders influence and enhance company performance, as these groups of shareholders hold quite significant amounts of shares in the company.

5.8 Conclusion

This chapter presents the results for panel data by checking the outliers, multicollinearity heteroscedasticity, autocorrelation and the Hausman test. The three equations developed for different samples in Chapter 4 were tested in this chapter. Next, the descriptive statistics, results of univariate tests and multivariate analyses are presented and discussed in this chapter.

The findings show that family-controlled companies have higher firm value than non-family controlled companies. Companies with larger board size are associated with higher firm performance. Board independence was found to be negatively related with firm performance. A higher number of independent directors' does not necessarily enhance firm value. Directors' education background is found to be insignificant with all companies and family-controlled companies, but non-family controlled companies are

significant with firm performance. Directors with a professional qualification do affect firm value. Family and non-family companies that practice duality leadership were found to show better firm performance than companies with separate leadership. In terms of ownership structure, managerial and family managerial ownership show a nonlinear pattern (entrenchment-alignment-entrenchment) with firm performance.

In terms of succession factors, family CEOs enhance firm performance greater than outside CEO. CEO with education qualification, young family CEO and second family generation (successors) were found to contribute greater value to companies than the founder generation. Thus, family and non-family companies have a similar business nature, but different corporate governance practices. Family companies are more influenced by succession factors that may affect the company performance. These elements are not noted when looking at the corporate governance or succession issues in broader terms.

The sensitivity analysis shows that the results are robust to different measurements and sub-samples. One interesting finding is the presence of the "founder effect", which influences the results for director's education. The exclusion of this effect would result in a consistent pattern with the theory and literature.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1 Overview of the chapter

This chapter concludes the main findings from the results presented in the previous chapter and suggests some recommendations for the appropriate regulatory bodies, relevant agencies and interested parties to consider. It consists of five sections. Section 6.2 summarises the findings from the three main equations in the study (Equation 4.1 to 4.3). The implications of the study are highlighted in Section 6.3. Next, Section 6.4 reports the limitations of the study and suggests future research. Section 6.5 concludes the entire study of this thesis.

6.2 Summary of the study

Family-controlled companies show a significant positive relationship with company performance. The results in this study are significant and positive in all estimations using all measurements of performance (i.e. Q, ROA, ROE, EPS and OCF). Hence, hypothesis H_1 is supported. Family companies show higher company performance because of the following reasons. First, in order to form family companies, a lot of time, effort and sacrifice is needed from the families. In addition, family managers generally use their own money to set up business, find opportunities and compete in creating their own

market niche. Thus, to compensate the sacrifice of time and money being made, family companies must perform better than non-family companies. Further, family companies need to repay the hard work of the family members. Thus, with high performance, family companies are able to pay bonuses and dividends, which are going back into the family members' pockets. Next, family companies must make sure that family companies generate higher profits because one of the aims of setting up a family company is to pass the business to the next generation. Therefore, this study affirmed Research Objective 1, that Malaysian family-controlled companies have higher firm value than non-family controlled companies.

Research Objective 2 focuses on the relationship between board attributes and firm performance for variables board size (H_2, H_{2a}, H_{2b}), board independence (H_3, H_{3a}, H_{3b}), directors with degree qualification (H_4, H_{4a}, H_{4b}), directors with professional qualification (H_5, H_{5a}, H_{5b}) and leadership structure (H_6, H_{6a}, H_{6b}). Findings from this study support the hypotheses H_2, H_{2a}, H_{2b} for board size, H_3, H_{3a}, H_{3b} for board independence, H_{4b} for directors with degree qualification, H_5, H_{5a}, H_{5b} for directors with professional qualification and H_6, H_{6a} for leadership structure.

Board size (BSIZE) was found to have a positive relationship with firm performance, for all companies, family-controlled and non-family controlled companies. The findings show that larger board size leads to better company performance. The reasons behind these findings may be that a higher number of directors may increase the number of potential solution strategies, increase the range of perspectives, provide an increased pool

of expertise, provide better networking, and be more capable of monitoring the actions of top management. Larger board's size provides extra board monitoring and subsequently corporate players could perform their duties effectively and efficiently in enhancing shareholders value. Another explanation as to why Malaysian family-controlled companies have larger boards may be because of the reputation and practice of including a certain number of prominent Bumiputera as directors on the board. These Bumiputera directors tend to be from the royal families, politicians, civil servants and retired police or armed forces chiefs. Thus, it makes the board size larger. Therefore, H_2, H_{2a} and H_{2b} are supported.

In terms of board independence (BINED), the findings found mixed results. Independent non-executive directors enhance company performance. Higher number of independent non-executive directors has a positive impact on firm performance thus, supporting the view that greater exposure to the external environment improves access to various resources and thus positively impacts on firm performance. They are able to exercise the roles and power given to them by advising and monitoring the board. Moreover, independent directors are also objective in doing their works. Therefore, firm value is enhanced. However, the findings also reveal that there is a negative relationship between the percentage of independent directors and company performance for all companies, family-controlled and non-family controlled companies. More independent non-executive directors on the board cause company performance to decline. The arguments are that independent directors in Malaysia still perform a weak governance function. They create stifling strategic actions because they have a lack of knowledge about the firm, lack

authority and definable shareholder interest. Some directors have a personal relationship with the CEO, and it might affect their independence. Thus, H_3 is supported in this study, but not H_{3a} and H_{3b}.

Directors with degree qualification (BDEG) was found to be negatively related with performance for all companies (H_4). Thus, H_4 is not supported. The reason being that the effect of the founder education background influences the results. When the data exclude teh founders, the results are consistent with the theory. Most of the founders have low education background or no exposure to education. Education is vital for companies' performance. Further research should pursue this matter. In terms of family-controlled companies, there is no relationship between board degree and firm performance. Thus, H_{4a} is not supported in this study. Perhaps, the results may be due to the influence of the founders. Further testing was conducted to confirm hypotheses H_4 and H_{4a} by eliminating the founder education. The results show that when founder was dropped, directors' education background enhances company performance. Thus, findings support the theory and literature on directors' education. However, for non-family controlled companies, there is a positive relationship between directors with degree qualification and company. Hence, H_{4b} is supported. Directors that have education are better at handling problems and are more capable of managing the companies.

Interestingly, when directors with professional qualification (BEXP) was tested against firm performance, the results show a positive direction with all companies, family-controlled companies and non-family controlled companies. Therefore, H_5, H_{5a} and H_{5b}

are supported in this study. Professional directors are more knowledgeable, competent and have wider experience compared to other directors. Their ideas and advice are useful in helping the board to make decisions. Therefore, these professional directors actually add value to the company by enhancing the firm performance.

Remarkably, findings show that there is a negative relationship between companies that exercise a separate leadership structure (LSHIP) and company performance for all companies, family-controlled companies and non-family controlled companies. The findings show that companies prefer to practise dual leadership structure. Thus, H_6 and H_{6a} are supported, but not H_{6b}. The reason why Malaysian companies prefer to have duality leadership may be due to the nature of the ownership structure in Malaysia. Most companies in Malaysia are highly concentrated and managed by family companies. Thus, by having duality leadership, the power and control are in the hands of the CEO/Chairman. Therefore, the business operation becomes more efficient, less bureaucratic and decreases the information asymmetry. A strong dominant CEO may be appropriate for a developing economy such as Malaysia where the system may be dependent on a few powerful corporate players to push the firm performance.

Next, Research Objective 3 measures the ownership structure (managerial ownership (H_7), family ownership (H_{7a}) and non-family ownership (H_{7b})) with company performance. This study found that managerial ownership is significant, but in the opposite direction for all samples. When the sample is divided into family and non-family

companies, interesting results emerged. The results show that only family business behaves as expected (H_{7a}). For non-family business, the results were not significant (H_{7b}). For all samples (H_7), the results were similar to the results for family businesses. Given the above, the results indicate that the alignment-entrenchment hypothesis is true for family business, similar to the Hong Kong study (Ng, 2005). Perhaps this is because of the influence of the concentrated ownership structure and because most companies in Malaysia are held by family businesses. Interestingly, family ownership shows a nonlinear pattern (entrenchment-alignment-entrenchment), which is consistent with the theory. Non-family managerial ownership does not show any significant relationship with company performance. Hence, the findings support H_{7a}, but not H_7 and H_{7b}.

Research Objective 4 relates to family succession attributes and company performance. This study found that family CEOs (CEO) enhance firm performance more than outside CEOs. Family CEOs work hard because the company is part of the family affairs, and family companies are usually passed to the next generation. Family CEOs also understand the firms better than outside CEOs and are able to make better decisions. Therefore, H_8 is supported. Furthermore, CEOs with education background (BEDUC) positively affects company performance. Family companies have acknowledged the importance of education. Children are sent for higher education and it is also part of succession planning. This is also the company's strategy to ensure that the family continues for the next generation. Educated CEOs also have an advantage in managing the companies because the knowledge is already gained during the education period. Hence, H_9 is supported in this study.

The findings also revealed that there is a relationship between CEO age (AGE) and company performance. Younger CEOs enhance firm value more than older CEOs. Young CEOs were found to be more willing to take risk, able to change faster, and are creative and innovative in grabbing opportunities. These characteristics indirectly help to boost the company performance. Thus, hypothesis H_{10} is supported. It is evidenced in this study that there is no significant relationship between male CEO (GENDER) and company performance. Hence, H_{11} is not supported in this study. Further analysis was conducted by splitting the male to successor and founder group. It was found that male successor enhances firm performance, and not male founder. The findings also show that CEOs in second generation (GEN) enhances company performance greater than CEOs in first generation. The descendant or successor CEO generates more profit because of the experience gained from the CEO's founder. Therefore, H_{12} is not supported in this study. Based on the five hypotheses under succession attributes, the findings confirm that there is an association between the succession attributes and company performance.

6.3 Implications of the study

Both theoretical and practical implications of the study are discussed in the following sections.

6.3.1 Theoretical implications

This present study explicitly investigates the relationship between family-controlled companies, corporate governance mechanisms (board and ownership structure) and succession attributes with firm performance. Further, this study includes some new variables (directors with degree qualification and directors with professional qualification) for board attributes and succession attributes. In doing so, this study contributes to the extant literature and provides more evidence on family-controlled and non-family-controlled companies findings based in a Malaysian setting.

In terms of agency theory, the typical relationship between agents and principals are not clearly seen in Malaysia as compared to Western countries. In Malaysia, owner-managers of family companies are common. The owner who is the principal also acts as the agent for the company and the separation of ownership and control are blurred. In fact, stewardship theory was found to be more pronounced in this study. This is because the owner also acts as the steward for the company. Therefore, the owner/steward works best for the interests of the company, and neglects their personal interests. This scenario is clearly seen in the case of family-controlled companies, whereby the family managers expend their effort for the company and strive hard to make sure that the company survives for the next generation and where the success of the business is the pride of the families.

This study also determined that the alignment-entrenchment hypothesis does not hold for managerial ownership and performance in the Malaysian context. This study found that the ownership structure in Malaysia does show a nonlinear (entrenchment-alignment-entrenchment) relation but that it is influenced by the presence of family ownership. Thus, the findings in the Malaysian context are not the same as those claimed for Western countries. These differing results may be because in Malaysia the ownership structure is highly concentrated and most of the companies are controlled by families. Thus, the structure of the managerial ownership is highly influenced by the family ownership structure. Another reason may be due to ethnic diversity with different cultures, practices and beliefs. There are three main ethnic groups in Malaysia: Malays, Chinese and Indian. However, the Chinese have a strong monopoly in business compared to the other ethnic groups. Chinese businesses are more oriented towards family businesses and the majority of the shares are in the hands of the family members. Therefore, the ownership structures tend to be more concentrated in nature, which indirectly influences the managerial ownership in Malaysia as a whole.

6.3.2 Practical implications

This study is important to companies and shareholders in Malaysia in a number of ways. First, the results from this study provide valuable information for potential investors, stakeholders and the public in general, thereby enabling a better understanding of the characteristics of family-controlled and non-family controlled companies, the role of corporate governance mechanisms of companies and succession planning in relation to

firm performance. This is because the characteristics between these two groups are similar in terms of board size, board independence, directors with professional qualification and leadership structure. However, they are different in terms of directors with degree background and ownership structure.

Next, most companies comply with the Code based on the data from this study. However, there are some companies that do not follow the rules, especially concerning Chairman/CEO duality and board independence. This study found that PLCs that favour larger board size have better company performance. Companies with duality leadership show higher firm value than those with separate leadership. These findings indicate that, in general, companies in Malaysia comply with the Code. However, companies that show higher firm performance are seen to comply with the Code at a minimum level, and these companies prefer to use their existing practices where given the choice by the Code. For example, companies that practise dual leadership show better company performance than separate leadership. Thus, the Securities Commission should provide more flexibility to companies. It might be inappropriate for regulators to advise all companies to follow the same set of corporate governance guidelines, especially family companies. Certain requirements on family companies should be reviewed because the behaviour of family businesses is different from other companies. For example, separation of leadership increases the level of bureaucracy. Therefore, a family business with duality leadership has better performance because decision making is prompt and resolute.

The third point highlights the ways to safeguard stakeholders' interests by appointing non-executive directors that are 'really independent'. One of the ways to have 'independent' non-executive directors is to have an independent body in charge of these directors, and make all PLCs select and appoint independent directors from this pool. Therefore, anybody that is qualified to sit as an independent non-executive director can register with this independent body. Then, PLCs that need independent directors will contact the regulatory body and make a selection. Thus, creating a pool of independent directors with experience and skills in specific areas may provide the required quality of independent directors for the PLCs, including family businesses. Recently as reported in the News Straits Times (dated June 3, 2009), the MSWG has received several requests from PLCs to assist them in obtaining quality independent directors. This indicates that there is an increase in the level of corporate governance awareness among the PLCs in Malaysia. The appointment is more transparent and qualified directors are invited to be on the board. Only then can the role and function of an independent director be utilised.

Lastly, this study also provides practical implications to managers. Managers need to be aware of how board governance characteristics in different types of ownership structure influence the firm value. Awareness of these board governance characteristics would allow managers to choose appropriate approaches in dealing with the board of directors. It should be noted that the benefits of increasing firm value through enhanced board governance are not the same across all firms.

6.4 Limitations of the study and area of future research

First, while the Malaysian data provides richer understanding to this research, care should be taken in generalising the results to other countries because of different regulations, practices, and economic factors. The Malaysian capital market differs from international markets in terms of size, number of listed firms, and market valuation. However, the findings and policy implications of this study can be extended to other economies where there are similar ownership characteristics.

This paper collected data from the annual reports based on the availability of firms listed on the Bursa Malaysia website. Some companies were dropped due to insufficient information. Given the size of the final sample, that is, 420 listed non-financial firms, the results might not be applicable to the finance, unit trust, small and unlisted companies. In order to improve the generalisability of the results of this study, future studies can be expanded to include firms listed on the MESDAQ (Malaysian Exchange of Securities Dealing and Automated Quotation Berhad) market and also Small Medium Enterprises (SMEs).

Third, this study utilises the panel data approach, which is powerful in analyzing longitudinal data. However, it is a market-based research. Some individual and unique behaviour might not be captured in the model. Perhaps a more "sensitive" research instrument and the use of alternative analytic techniques might better capture some of the

observations. Future studies may also consider questionnaire and interview approaches, to explore from another perspective.

Next, this study only examines managerial ownership, family managerial ownership and non-family managerial ownerships. Therefore, future research may consider examining other forms of ownership that might affect performance. For example, other structures such as blockholding could also influence the value of the firm.

Fifth, looking at the preparation for succession, there are two factors worth exploring. One is the influence of family members (e.g., relatives in the workplace) on succession decisions. The influence of family members is contingent on their familial relationship (e.g., spouse, parent, child, sibling and cousin) and their position or role in the organization (e.g., line management, staff, operative). This information could be obtained via interviews. Another area for future investigation concerns the generational differences in family businesses. The personality and other individual characteristics of the founder have a great impact on the company and some founders may continue to exert influence or cast a "shadow" over the company, even when he or she is no longer in direct control or physically present.

Lastly, research on the concepts and values of Islamic corporate governance is lacking. With respect to research insights, it might be interesting to explore the concepts of Islamic corporate governance practices in Malaysian companies.

6.5 Conclusion of the study

In summary, this study investigates the relationship between family-controlled companies, corporate governance mechanisms (board and ownership structure) and family succession attributes towards company performance among Malaysian PLCs. This study enhances our understanding of the family-controlled and non-family controlled characteristics influencing firm performance, especially with the unique culture and business environment in Malaysia. The results of this study provide evidence that the Malaysian environment is unique, with a preponderance for family business and higher ownership structure and is not similar to the Western markets.

The stewardship theory is more applicable for most Malaysian family businesses, as the owner-managers are the stewards of the companies and they manage the companies for the benefit of the stakeholders including themselves. The corporate governance is practiced by Malaysian companies, however, further improvements are still needed to strengthen Malaysian corporate governance. Perhaps, the Code should be made flexible to accommodate the family businesses. Some requirements like the separation of duties between the Chairman and CEO might discourage family businesses from floating their shares on the capital market.

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APPENDIX A: Literature matrix

Panel A: A summary of selected published empirical studies on family firms versus non-family firms performance

Country	Author (s)	Sample size	Year of study	Performance measure	Findings
Hong Kong, Indonesia, Malaysia, Singapore, South Korea, Taiwan and Thailand)	Nowland (2008)	221	1998-2004	Tobin's Q, ROA	Family-owned companies not improving their board governance to the level on non-family-owned companies.
United States	McConaughy et al. (1998)	219	1987	Market-to-book value- of equity (MBE)	Founding family controlled firms are more efficient and valuable than non-founding family controlled firms with respect to industry, size and managerial ownership.
Israel	Lauterbach & Vaninsky (1999)	280	1992-1994	Actual net income/optimal net income	Owner-manager firms are less efficient in generating net income than firms managed by professional (non-owner) manager.
United States	McConaughy et al. (2001)	219	1986-1988	Tobin's Q.	Family firms perform better in terms of efficiency, capital structure and value.
United States	Miller & Breton-Miller (2006)	Large and publicly traded family businesses	N.A.	ROA, ROE	Family controlled firms do best when they take advantage of the potential for lower agency costs.
Chile	Martinez et al. (2007)	175	1995-2004	ROA, ROE, Tobin's Q.	Public family firms perform better than public non-family firms.

Country	Author (s)	Sample size	Year of study	Performance measure	Findings
Malaysia	Amran & Che-Ahmad (2009)	298	2000-2003	Tobin's Q	Board size and leadership structure affect the firm value for all companies and family businesses.
Malaysia	Ibrahim et al. (2009)	290	1999-2005	Tobin's Q, ROA, ROE.	Firm value is lower in family ownership than non family ownership.

Panel B: A summary of selected published empirical studies on ownership structures

Country	Author (s)	Sample size	Year of study	Findings
United States	Demsetz & Lehn (1985)	511	1976-1980	No significant relationship between ownership concentration and accounting rate of return.
United Kingdom	Ezzamel & Watson (1993)	600	1982-1985	Ownership structure has a direct impact on corporate performance, through interactions with organizational form variables.
Spain	Gorriz & Fumas (1996)	81	1990	Family firms on average have higher productive efficiency than non-family firms.
Argentina, Australia, Canada, Hong Kong, Ireland, Japan, New Zealand, Norway, Singapore, Spain, UK, US, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Israel, Italy, South Korea, Mexico, Netherlands, Portugal, Sweden and Switzerland.	La Porta et al. (1999)	54	1995	Families or the State typically controls the firms. Controlling shareholders have power over firms.
Canada, France, Germany, Italy, Japan, US, and UK.	Han et al. (1999)	2610	1991-1994	No evidence that firm performance is improved by concentration of insider ownership.

Country	Author (s)	Sample size	Year of study	Findings
Hong Kong, Indonesia, Japan, South Korea, Malaysia, the Philippines, Singapore, Thailand and Taiwan.	Claessens et al. (2000)	2980	1998	The separation of ownership and control is most pronounced among family-controlled firms and small firms.
Thailand	Wiwattanakantang (2001)	270	1996	Family-controlled Firms' display significantly higher performance.
Austria, Belgium, Finland, France, Germany, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland and UK.	Faccio & Lang (2002)	5232	1996-1999	Non-financial and small firms are more likely family controlled.
Belgium	Berghe & Carchon (2002)	2602	1997	The composition of the shareholders differs between family and non-family firms.
Australia	Welch (2003)	114	1999-2000	A non-linear relationship exists between managerial share ownership and firm.
Taiwan	Yeh et al. (2001)	208	1994-1995	Family control is more prevalent in Taiwan. Family-controlled firms with low levels of control having lower relative performance than family-controlled firms with high levels of control and widely held firms.
United States	Schulze et al. (2001)	1376	1995	Family-managed firms incur agency costs.

Country	Author (s)	Sample size	Year of study	Findings
Thailand	Yammeesri & Lodh (2004)	243	1993-1996	A positive association between controlling ownership and firm performance. Firms with controlling ownership have higher performance than those with non-controlling ownership.
Germany, UK, Spain, Italy, and France	Kirchmaier & Grant (2005)	110	2002	Ownership structures vary considerably across the largest European economies and ownership has a significant impact on firm performance. Dominant shareholders have a negative impact on long-term share price performance.
Hong Kong	Ng (2005)	1328	1995-1998	Family-owned corporate structure and ownership affects performance. At a very high level of ownership, the entrenchment effect becomes dominant.
Hong Kong	Chen et al. (2005)	412	1995-1998	There is no positive relationship between family ownership and ROA, ROE or the market-to-book ratio.
Australia	Bartholomeusz & Tanewski (2006)	100	2001-2002	Family firms utilize different corporate governance structures from non-family firms and these differences lead to performance differentials. Family control creates, rather than negates agency costs.
Taiwan	Chen (2006)	466	2000-2001	Family involvement in the firm's

Country	Author (s)	Sample size	Year of study	Findings
				management and the related party transactions significantly determine the firm's decision on the choice of the ownership regimes.
Greece	Kapopoulos & Lazaretou (2007)	175	2000	Concentrated ownership structure positively relates to higher firm profitability.
Korea	Cho & Kim (2007)	600	1999	Korean firms exhibit an owner-controlled governance structure. The managers of Korean firms are either owner-managers or dependent on controlling shareholders.
Turkey	Mandaci & Gumus (2010)	203	2005	Ownership of Turkish firms is highly concentrated. The unlisted holding companies have highest average percentage of shares and it is belief to belong to individuals or families that have holding companies, in order to control their listed firms.

Panel C: A summary of selected published Malaysian empirical studies on ownership structure

Author(s)	Sample size	Year of study	Findings
Hui (1981)	62	1974-1976	0.8 % of shareholders owned 69% of all shares in the 62 largest Malaysian firms.
Mat Nor et al. (1999)	79	1993	Only the financial performance (except for EPS) for ownership between 5% to 25% is significant and there is no relationship between the structure of ownership and its earnings performance.
Ow-Yong & Guan (2000)	Malaysia and UK companies	1999	Malaysian listed firms are owned by controlling and substantial shareholders. Firms that evolved from traditional family owned enterprises continued to be managed as if they are still owned by its founder members.
Che-Ahmad et al. (2003)	236	1995	Block-holders (outside and managerial shareholders who owned at least 5% shares) hold around 60.75% of ownership.
Ishak (2004)	355	2001	The majority of the firms have an ultimate controlling owner, particularly an individual or family.
Chu & Cheah (2004)	147	1995-2001	Partially proved that ownership structures are able to extract cost and benefits the governance issues.
Song et al. (2005)	52	1990-1997	Concentrated ownership has a significant positive impact on the post-takeover performance and vice versa for diffused ownership.
Tam & Tan (2007)	150	1994 –2001	Concentrated ownership and CEO-duality are found to affect firm performance of Malaysia's public listed companies.

Panel D: A summary of selected published empirical studies on family succession

	Author (s)	Sample size/Sample period	Year of study	Findings
US	Trow (1961)	198	1956	The main factors influencing succession planning and subsequent profitability are the availability and competence of a family member as successor.
United States	Handler (1990)	32	1985	Family succession can be conceptualized as a mutual role adjustment between entrepreneur and next-generation family member(s).
United States	Kets de Vries (1993)	300	N.A.	Difficult for founder to accept his or her own mortality and to let go the power. Generational envy between parents and children. Not only the CEOs have problems in letting go of the power, but also their spouses. Difficult in choosing a successor among children. When children have been selected as the successors, they feel uncomfortable with parents around. Symbolic value built by the founder.
United States	Morris et al. (1996)	500	1994	Heirs tend to be reasonably prepared, both in terms of their educational background and experience. Relationships within the family are generally positive, with limited levels of conflict,

	Author (s)	Sample size/Sample period	Year of study	Findings
				rivalry or hospitality.
United States	Davis & Harveston (1998)	1002	1994	The generational shadow of the founder is the primary mechanism driving the increase in overall conflict among second-generation-led family firms.
United States	Beckhard & Dyer (1983)	Case study	N.A.	If founders and partners realize that management of succession planning is vital, then the families will plan for it. Need for a specific mechanism of transition management.
Netherlands	Floren (1998)	191	1998	The high percentage of family firms that have not defined their succession procedures and 29% of the CEOs run their businesses for at least 20 years should warn family firm practitioners and policy makers to cater to the needs of these firms and to give them special attention.
Italy, United States	Corbetta & Montemerlo (1999)	252	1995	86% of Italian entrepreneurs believe that a group of family members will be owners in the next generation. 54% of Italian entrepreneurs, a 'team at the top' will lead the company in the next generation.

	Author (s)	Sample size/Sample period	Year of study	Findings
United States	Davis & Harveston (1996)	1616	1993-1994	The influence of family members in day-to-day operations, demonstrated an influence extending across multiple generations. The more closely related family members are to the owner/manager, and the higher the role or position they occupy, the greater will be their collective influence over the number of family members involved in day-to-day operations.
United States	Stavrou (1999)	153	1993	Offspring not necessarily want to join or take over the family business. Parents should not pressure their off-spring to join the firm as employees.

APPENDIX B: Summary of hypotheses and results

Hypothesis	Description of hypothesis	Hypothesis direction	Results					Hypothesis supported?
			Q	ROA	ROE	EPS	OCF	
H_1	Ceteris paribus, family-controlled companies have higher company performance than non-family controlled companies.	+	+***	+***	+***	+***	+***	Yes
H_2	Ceteris paribus, there is a relationship between board size and company performance.	+/-	+	+***	+***	+***	+***	Yes
H_{2a}	Ceteris paribus, there is a positive relationship between board size and company performance, for family-controlled companies.	+	-	+***	+***	+***	+***	Yes
H_{2b}	Ceteris paribus, there is a positive relationship between board size and company performance, for non-family controlled companies.	+	+*	+**	+	+	+***	Yes
H_3	Ceteris paribus, there is a relationship between the percentage of independent non-executive directors and company performance.	+/-	-	-***	+**	-***	-***	Yes

Hypothesis	Description of hypothesis	Hypothesis direction	Results					Hypothesis supported?
H_{3a}	Ceteris paribus, there is a relationship between the percentage of independent non-executive directors and company performance, for family-controlled companies.	+/-	+*	-	+	+*	-*	Yes
H_{3b}	Ceteris paribus, there is a positive relationship between the percentage of independent non-executive directors and company performance, for non-family controlled companies.	+	-	-**	-	-	-**	Significant with opposite direction (explanations are provided in the text)
H_4	Ceteris paribus, there is a positive relationship between the percentage of directors' education and company performance.	+	+	-	+	+	-*	Significant with opposite direction (explanations are provided in the text)
H_{4a}	Ceteris paribus, there is a positive relationship between the percentage of	+	-	+	-	+	+	Not significant

Hypothesis	Description of hypothesis	Hypothesis direction	Results					Hypothesis supported?
	directors' education and company performance, for family-controlled companies.							
H_{4b}	Ceteris paribus, there is a positive relationship between the percentage of directors' education and company performance, for non-family controlled companies.	+	+***	-	+	-	-	Yes
H_5	Ceteris paribus, there is a positive relationship between the percentage of experts and company performance.	+	+	+***	+***	+***	+***	Yes
H_{5a}	Ceteris paribus, there is a positive relationship between the percentage of experts and company performance, for family-controlled companies.	+	+	+	+	+***	-	Yes
H_{5b}	Ceteris paribus, there is a positive relationship between the percentage of experts and company performance, for non-family-controlled companies.	+	+	+	+**	+	+**	Yes
H_6	Ceteris paribus, there is a relationship between companies that practice separate leadership and company	+/-	-***	-	-	+	-*	Yes

Hypothesis	Description of hypothesis	Hypothesis direction	Results					Hypothesis supported?
	performance.							
H_{6a}	Ceteris paribus, there is a negative relationship between family-controlled companies that practice separate leadership and company performance.	-	-	-	-	-	-***	Yes
H_{6b}	Ceteris paribus, there is a positive relationship between non-family controlled companies that practice separate leadership and company performance.	+	-***	+	+	-	+	Significant with opposite direction (explanations are provided in the text)
H_7	Ceteris paribus, there is a nonlinear relationship (alignment-entrenchment-alignment) between managerial ownership and company performance.	+ - +	- + -	-*** +*** -***	-*** +*** -**	-*** +*** -***	-*** +*** -***	Significant with opposite direction (explanations are provided in the text)
H_{7a}	Ceteris paribus, there is a nonlinear relationship (entrenchment-alignment-	- + -	-** +***	-** +***	-*** +***	-** +***	-*** +***	Yes

Hypothesis	Description of hypothesis	Hypothesis direction	Results					Hypothesis supported?
	entrenchment) between family ownership and company performance, for family-controlled companies.		-***	-***	-***	-***	-***	
H_{7b}	Ceteris paribus, there is a nonlinear relationship (alignment-entrenchment-alignment) between managerial ownership and company performance, for non-family controlled companies.	+ - +	+-+	+-+	+-+	+-+	+-+	Not significant
H_8	Ceteris paribus, there is a positive relationship between family CEO and company performance.	+	+***	-	+	+**	+	Yes
H_9	Ceteris paribus, there is a positive relationship between CEO education level and company performance.	+	+	+***	-	+*	+	Yes
H_{10}	Ceteris paribus, there is a relationship between CEO age and company performance.	+/-	-**	-	-	+	-	Yes
H_{11}	Ceteris paribus, there is a relationship between male CEOs and company performance.	+/-	+	+	-	+	-	Not significant
H_{12}	Ceteris paribus, there is a positive relationship between founder (first	+	+	-***	-**	-	-***	Significant in the

Hypothesis	Description of hypothesis	Hypothesis direction	Results					Hypothesis supported?
	generation) and company performance.							opposite direction (explanations are provided in the text)

APPENDIX C: Summary for all companies (MB and SB)

Main Board					
	Q	**ROA**	**ROE**	**EPS**	**OCF**
FCF	.0006759***	.0002547***	.0002924***	.0001284*	.0001227*
BSIZE	-.0005045	.0025367***	.0059812***	.0056725***	.0042696***
BINED	-.0016819	-.0214432***	-.0147139	-.0127363	-.0215309***
BDEG	.0052905	.0088651*	-.0011037	.0082365	.0124433*
BEXP	.0235759	.0102396	.0546824***	.0272621	.0101023
LSHIP	-.0161529***	-.0022315	.0008736	-.0150608	-.0091936***
MOWN	-.0012049*	-.0010556***	-.0016035***	-.0044889***	-.0012702***
$MOWN^2$	.0000362	.0000265***	.0000459***	.0001092***	.0000275***
$MOWN^3$	-3.67e-07	-1.75e-07	-3.57e-07	-6.84e-07***	-1.02e-07
DEBT	.0308602***	-.0093276	-.0385721	-.0110615	-.0076832
FSIZE	-.0143484***	.0055575***	.0060019***	.057557***	.0056493***
FAGE	-.0000578	-.0005766***	-.001023***	-.0007349**	-.0006454***
CP	.0668943***	.0260938***	.0211973**	.0957546***	.0277731***
IP	.1009412***	.0287567***	.0269352***	.0677674***	.0422***
TS	.0743713***	.0168643***	.0103071	-.0003415	.0180107***
PROP	.092826***	.0061788*	-.0252715***	-.0150503	-.0221234***
OTHERS	.111723***	.0293869***	.023749***	.0441622***	.0221776***
_CONS	.9178557***	-.0666774***	-.0752858***	-.6795969***	-.0259081

Second Board					
	Q	**ROA**	**ROE**	**EPS**	**OCF**
FCF	.0002602	.0000849	-.0002331	.0001389	.0000987
BSIZE	-.0030144*	-.0033674**	.0012168	.0016943	-.0040171***
BINED	-.0119814	-.0120702	.0740346	-.0073978	-.0095841
BDEG	.0091082	-.038686***	-.0296421	.0186224	-.0494556**
BEXP	-.0062331	-.0541765*	-.0593348	-.0084876	-.0479174**
LSHIP	-.0161301	-.0071131	-.0083033	-.0041967	-.0060647
MOWN	-.0001256	-.0009675	.0004928	-.0020622	.000397
$MOWN^2$	.0000468	.0000541	.0000443	.0001202**	-2.75e-06
$MOWN^3$	-6.76e-07*	-5.14e-07	-4.30e-07	-1.34e-06**	5.51e-08
DEBT	-.1386004	-.0280458	-.080466	.3706052***	-.0381403
FSIZE	-.0154242**	.0283287***	.0709166***	.0202719**	.0325036***
FAGE	.0005961	.0015943***	.0022753*	-.0002406	.0005954
CP	.0826034***	.0157114	.0002847	.0087913	.0275108*
IP	.0957745***	.0133635	-.0133753	-.010414	.0389122**
TS	.0951662***	.0119604	.0099861	-.0184344	.0458466***
PROP	-.1053266	-.086108***	-.1907885*	-.0824747	-.061669***
OTHERS	.1275703***	.0053318	-.0431762	.0057711	.01064
_CONS	.8822671***	-.360512***	-.875483***	-.2524874*	-.370783***

APPENDIX D: Summary for family-controlled companies (MB and SB)

Main Board					
	Q	**ROA**	**ROE**	**EPS**	**OCF**
BSIZE	-.0018634	.0011026	.0010071	.0021091	[illegible]
BINED	[illegible]	-.0226068	[illegible]	.0488908	-.0223946
BDEG	-.0125566	-.0009396	-.020255	.0002078	.0081925
BEXP	.0160819	[illegible]	[illegible]	.0041278	.0080975
LSHIP	-.0072216	-.0017303	-.0045752	-.0054761	[illegible]
FOWN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
$FOWN^2$	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
$FOWN^3$	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CEO	[illegible]	-.0021923	-.0038429	[illegible]	.000209
EDUC	.0093349	[illegible]	-.0121267	[illegible]	.0022473
AGE	-.0000922	-.0001608	[illegible]	.0000505	[illegible]
GENDER	.0022799	.0008435	-.0188694	.0236733	-.0152374
GEN	[illegible]	.0033534	.0097876	.0182844	-.0043805
DEBT	.0346409*	-.0241752**	-.1189651**	-.0777119	-.023125**
FSIZE	-.0171967***	.0005402	.0170656***	.0416786***	.003631*
FAGE	-.0004056	-.0005654***	-.0009291***	-.0004843	-.0002959
CP	.0388433**	.0159915**	.0107615	.0389668**	.0192776**
IP	.0796953***	.0304752***	.0293461***	.0550695***	.0275406***
TS	.0126996	.0074688	.0264288*	-.0328262*	-.0060208
PROP	.1097545***	.0037418	-.0261471***	-.0293635*	-.0392186***
OTHERS	.1450769***	.0357371***	.0164819	.0156463	.0120248
_CONS	.8738103***	.0432485	-.0435845	-.5458042***	.1053514***

Second Board					
	Q	**ROA**	**ROE**	**EPS**	**OCF**
BSIZE	.0016493*	.0038463***	.0109175***	.0105292***	.0061907***
BINED	-.0303915**	-.0107319	.066139	.0768511*	-.0128035
BDEG	-.0264854	.0117339	.0138474	.0276052	.0130937
BEXP	-.0666744	-.0324301	-.1446202	.1236128	-.0350704
LSHIP	-.0089978	.0010157	-.0103243	-.0427078	-.0189895
FOWN	-.0001716	-.0013563	-.0036329	.0012319	-.0017767
$FOWN^2$	5.69e-06	.000018	.0000745	-.0000347	.0000258
$FOWN^3$	-6.54e-08	9.56e-08	-2.32e-07	3.22e-07	1.01e-08
CEO	.0265552	.0772172**	.23656	.0989114*	.0522588
EDUC	-.0229108	-.0054404	.0095942	.0023215	-.0038786
AGE	-.0012309*	.0000297	.0007123	.0000131	.0006393
GENDER	-.106135*	.1899032***	.4107225***	.2046204	.1466845**
GEN	.0025602	.0013755	-.0216434	-.0206747	.000806
FSIZE	-.0257085**	.0063572	.0300725*	.0055207	-.0018109
FAGE	-.0019692	.0013794	.0014344	.0029557	.0015105
CP	-.0550133*	.0211678	.0260253	.0716467**	.026376
IP	-.0238665	.0171109	.0160307	.0240206	.0307829*
TS	-.0260749	.0026065	-.0006153	.025448	.0368426**
OTHERS	.0313221	-.0432948*	-.1046495**	-.0294981	-.0352874
_CONS	1.143896***	-.3614387***	-1.054187***	-.4692216**	-.173725

APPENDIX E: Summary for non-family controlled companies (MB and SB)

Main Board					
	Q	**ROA**	**ROE**	**EPS**	**OCF**
BSIZE	-.0003425	.008137***	.0069739***	.0109041***	.0063173***
BINED	-.0240371	-.035953***	-.0362581*	-.0498458	-.043002***
BDEG	.0300331*	-.0080709	.0021044	.0218317	-.0081081
BEXP	.0365586*	.0134971	.1566143***	.0482199	.026761*
LSHIP	-.0111589	.0051854	.0183904	-.039662***	.0049488
NFOWN	.0004983	-.0000955	-.0011527	-.0028119*	-.001377**
$NFOWN^2$	-.0000253	-.0000274	.000013	.0000269	.0000119
$NFOWN^3$	1.79e-07	4.99e-07**	1.49e-07	2.27e-07	2.03e-07
DEBT	.0217428	-.0037765	-.0308338	.0026384	-.001563
FSIZE	-.019366***	.0055508***	-.0006891	.0607802***	.0066724***
FAGE	.0002609	-.0002823*	-.000817***	-.0004033	-.000558***
CP	.0708583***	.0195319**	.0007587	.154514***	.0306964***
IP	.1184921***	.0175401*	-.0071227	.1214618***	.0459989***
TS	.0997143***	.0121015	-.0279596	.0496796*	.0256115**
PROP	.0768136***	-.0002772	-.059111***	.0228127	-.0160949
OTHERS	.0897118***	.0144665	-.0115458	.0849755**	.0353083***
_CONS	.9490753***	-.0536494*	.0279301	-.794911***	-.0539686

Second Board					
	Q	**ROA**	**ROE**	**EPS**	**OCF**
BSIZE	.0019704	.0037655*	-.001252	.0001066	.0031919
BINED	-.0009534	.0086219	.1173265	-.0938131**	.0163866
BDEG	-.062045***	-.0785608***	-.0523364	.0281827	-.093122***
BEXP	.01895	.0676406	-.038842	-.0584327	.0337502
LSHIP	-.0624534***	-.020362	-.0537819	-.0045656	-.0126552
NFOWN	-.0003496	-.0022066	-.0008209	-.0019758	-.0017469
$NFOWN^2$	.000067	.0001108*	.0001124	.0001251	.0000625
$NFOWN^3$	-2.42e-07*	-1.18e-06*	-1.46e-06	-1.59e-06	-5.14e-07
DEBT	-.1308988	-.0347047	-.0808638	.4013877***	-.0477452
FSIZE	-.018006*	.0819135***	.1209781***	.002033	.069993***
FAGE	.0025259***	.0017635**	.0030015	-.0014457	.0002532
CP	.1468984***	.0003858	-.0598476	-.1088709	.0279304
IP	.1714177***	.0046394	-.0057236	-.0537666	.0381914
TS	.1572326***	.0158476	.0045708	-.0959969	.0522778
PROP	-.0706473	-.0788302	-.2130142	-.112994	-.0502124
OTHERS	.0276342	.0362934	.0709789	-.0258223	.0571504
_CONS	.8316166***	-.934522***	-1.37347***	.0678721	-.741211***

APPENDIX F: Sensitivity analysis results for exclusion of founder effect

	Q	ROA	ROE	EPS	OCF
FCF	.0005***	.0003***	.0006***	.0005***	.0001*
BSIZE	-.0003	.0047***	.0075***	.0134***	.0066***
BINED	-.0022	-.0227***	.0501***	.0071	-.0214***
BDEG	.0057	[illegible]	[illegible]	[illegible]	[illegible]
BEXP	.0263**	.0118	.0729***	.0195	.0111
LSHIP	-.0191	-.0038	-.0087	-.0170**	-.0070*
MOWN	-.0002	-.0020***	-.0016***	-.0059***	-.0021***
$MOWN^2$	.0000	.0001***	.0000**	.0002***	.0001***
$MOWN^3$	-3.50e-07*	-4.93e-07***	-3.93e-07*	-1.25e-06***	-3.87e-07***
DEBT	.0129	-.0107*	-.0417	-.0101	-.0042
FAGE	-.0001	-.0004***	-.0007***	-.0004	-.0004***
CP	.0871***	.0134***	-.0542***	.0221	.0298***
IP	.1207***	.0110***	-.0423***	.0053	.0391***
TS	.0968***	.0097**	-.0376***	-.0070	.0302***
PROP	.1104***	.0084**	-.0681***	-.0228	-.0024
OTHERS	.1207***	.0226***	-.0279***	.0534***	.0338***
_CONS	.7066***	-.0100	-.0046	-.0607**	.0147

APPENDIX G: Sensitivity analysis results for independent director's expertise

	Q	ROA	ROE	EPS	OCF
Panel A: All companies					
FCF	.0004681***	.0002556***	.0005304***	.0002616**	.0002301***
BSIZE	.0002898	.0024858***	.0051867***	.0053777***	.0037328***
BINED	-.00851	-.0092907	.1067332***	-.0526023**	-.0143556
BDEG	.0087466	.0072506	.0450393***	.0301385***	.002279
IEXP	.0054166	-.0045491	[redacted]	.0087446	-.005164
LSHIP	-.0169769***	-.002324	-.0080162	-.0114865	-.0063505*
MOWN	-.0059198	.1118134	.9443034***	-.2121313	.0884489
$MOWN^2$	.0452424	-.2701293	-2.421455***	.114368	-.1747274
$MOWN^3$	-.0585287	.2035795	1.886816***	.0574765	.1001263
DEBT	.0285454***	-.0062313	-.0504442	.0055579	-.0047642
FSIZE	-.0144391***	.0125685***	.020408***	.064092***	.0130882***
FAGE	-.0001579	-.0002458**	-.000825***	-.0005749**	-.000407***
CP	.0756474***	.0237704***	-.0161673**	.0543713***	.0235572***
IP	.1012595***	.0212681***	-.0055415	.0344454***	.0362163***
TS	.0866728***	.010351***	-.0133385	-.0065818	.0261585***
PROP	.0963748***	.0076525**	-.0437191***	-.028564**	-.017377***
OTHERS	.115559***	.0262821***	-.0070171	.0317829**	.0239416***
_CONS	.9040571***	-.1847579***	-.4146901***	-.7176739***	-.144014***

	Q	ROA	ROE	EPS	OCF
Panel B: Family-controlled companies					
BSIZE	-.0019625*	.0025404***	.0054673***	.0036523**	.0033265***
BINED	.0105732	-.0079224	.0215956	.0513571**	-.0185351*
BDEG	-.0199465	.0027937	-.0229335*	.0158759	.0083071
IEXP	.004033	.0032036**	.0053795*	.008412**	.0008425
LSHIP	-.0121159*	-.005624	-.0008293	-.0004357	-.017422***
FOWN	-.002377**	-.0035266***	-.0044853***	-.0037256**	-.002947***
$FOWN^2$	.000093***	.0001001***	.0001425***	.0001347***	.0000805***
$FOWN^3$	-8.69e-07***	-7.48e-07***	-1.10e-06***	-1.08e-06**	-5.81e-07***
EDUC	.0063431	.0084693**	-.0056176	.0190767**	.0019351
AGE	-.0004697	.0001059	-.0002453	.0000469	-3.28e-06
GENDER	.0320645**	-.001796	-.0139698	.0228794	-.0105487
GEN	.0095928	-.0086449**	-.0120367*	-.0049934	-.013971***
DEBT	.0410372**	-.0310865**	-.203599**	-.0641371	-.0267492**
FSIZE	-.0181383***	.0066517***	.0245903***	.0421677***	.0069003***
FAGE	-.0006728**	-.0001854	-.0007045**	.0008071	.0000627
CP	.0468774***	.0133481**	.0105119	.047884***	.0123986*
IP	.072545***	.0165671***	.011702	.0264074**	.0168892**
TS	.0388052**	-.0032716	-.009984	-.0231494*	-.0008714
PROP	.1034364***	.0004177	-.0262489***	-.0246347	-.036216***
OTHERS	.1419221***	.0242448***	.0050966	.0173822	.0036781
_CONS	.9941294***	-.0497408**	-.2351334***	-.5668478***	.0300174

	Q	ROA	ROE	EPS	OCF
Panel C: Non-family controlled companies					
BSIZE	-6.59e-06	.0029581***	.0030574**	.0056425***	.004515***
BINED	-.0156082	-.0308951**	.0469297**	-.0508126*	-.0335568**
BDEG	.0456715***	-.0297159***	.0192391	.0099044	-.039321***
IEXP	.002521	-.0028827*	-.0048245*	-.001359	-.003648**
LSHIP	-.0176627	-.0017051	-.0183426**	-.0263406**	-.0007169
MOWN	.0003871	-.0012395**	.0012483	-.0015649	-.0012288**
$MOWN^2$	-4.10e-06	.0000279	-.0000467	.0000199	.0000161
$MOWN^3$	-7.65e-08	-1.11e-07	4.44e-07	2.66e-08	1.29e-07
DEBT	.0182561	-.0023374	-.0321158	.0087347	-.0015888
FSIZE	-.0168462***	.014966***	.0178497***	.0656652***	.0157865***
FAGE	.000537**	-.0002326*	-.0005895**	-.0007149**	-.000607***
CP	.0868468***	.0165767**	-.0467288*	.0912154**	.0244811***
IP	.1279494***	.0168874*	-.0203613	.0694617**	.041769***
TS	.1146785***	.0109047	-.0318468	.0548109	.0320417***
PROP	.0837712***	.0074445	-.0638783**	.0039565	-.0094716
OTHERS	.0968934***	.0192575**	-.0188958	.0818581**	.0355272***
_CONS	.884858***	-.1620834***	-.1857391***	-.7979065***	-.140952***

APPENDIX H: Sensitivity analysis results for managerial ownership

	Q	ROA	ROE	EPS	OCF
FCF	.0004782***	.000266***	.000466***	.0002883***	.0002204***
BSIZE	.0004404	.0027816***	.0052691***	.0054907***	.0039027***
BINED	-.0106219	-.0125932	.0828166***	-.0504539**	-.0207214*
BDEG	.0081676	.0028831	.0191191**	.02718**	-.0016775
BEXP	.0154632	.0203542***	.0957484***	.0226465	.0232446**
LSHIP	-.0175931***	-.0020278	-.0062638	-.0107302	-.0059599
MGROWN	-.0518412	.0574945	[illegible]	-.3228487***	.008659
MGROWN^{2}	.1361259	-.109162	[illegible]	.4423021	.0506869
MGROWN^{3}	-.1130886	.0748014	[illegible]	-.2023862	-.0765937
DEBT	.0275785***	-.0088227	-.0512235	.0086723	-.0052975
FSIZE	-.014158***	.0131693***	.0219209***	.0642211***	.0133256***
FAGE	-.0001529	-.0002193**	-.0006324***	-.0005275*	-.0004207***
CP	.0750027***	.0223063***	-.0175529**	.0561353***	.0251246***
IP	.101571***	.0204759***	-.0072962	.0385765***	.0371859***
TS	.0866704***	.0112746***	-.0092627	.0004952	.0265809***
PROP	.0944725***	.0060164*	-.0451423***	-.0284712**	-.0178054***
OTHERS	.1146167***	.026586***	-.0069824	.0356371**	.0255133***
_CONS	.9066838***	-.1917637***	-.3920139***	-.7189836***	-.14276***

APPENDIX I: Sensitivity analysis for firm size effect

	Q	ROA	ROE	EPS	OCF
Panel A: All companies					
FCF	.000505***	.0002286***	.000891***	.0002509**	.000199***
BSIZE	-.000813	.0041602***	.0075166***	.0136937***	.0053455***
BINED	-.0087242	-.0138541	.0839862***	-.0430**	-.0204932**
BDEG	-.0070207	.0250302***	.0551538***	.0091283**	.0228497***
BEXP	.0271615***	.0150853***	.0612238***	.0167421	.0137886***
LSHIP	-.0137541***	.0053522***	.0131726***	-.0157042***	.0095349***
MOWN	-.0228499	.1761384	.2220179***	-.0390877	.0902349
MOWN^2	.0784912	-.4836629**	-.8465704***	-.1499245	-.1939665
MOWN^3	-.0690347	.3208746**	.6465925***	.1401239	.106491
DEBT	.0143249	-.0084855	-.0326195	-.0080894	-.004709
FAGE	-.0001898	-.0001669	-.0005038**	-.0003153	-.0003681***
CP	.0792091***	.0146017***	-.0105151	.0368836***	.0168649***
IP	.1074295***	.01197***	-.0097571	.0034599	.0277315***
TS	.0844742***	.0122126***	-.002802	.0060268	.0219938***
PROP	.091012***	.0057474	-.0324632***	-.0136449	-.0184114***
OTHERS	.1046893***	.0301233***	.0038517	.0587902***	.0276279***
_CONS	.7369441***	-.0486968**	-.1523869***	-.0481767	.0021288
Panel B: Family-controlled companies					
BSIZE	-.0029008***	.0052022***	.0094499***	.0103358***	.0017615***
BINED	.0143916	-.011014	.0453091***	-.0725301***	-.0202455**
BDEG	-.0290699**	.0159481**	.0065781	.0538171***	.0216672**
BEXP	.0288822	.0138265	.0161902	.0671835***	-.0097929

	Q	ROA	ROE	EPS	OCF
LSHIP	-.0033165	-.0106837***	-.0073983	-.0046603	-.0210242***
FOWN	-.001783*	-.0017228***	-.0047685***	-.0045502***	-.0029837***
$FOWN^2$	.0000672**	.0001113***	.000157***	.0001578***	.0000848***
$FOWN^3$	-6.36e-07**	-8.79e-07***	-1.48e-06***	-1.27e-06***	-6.48e-07***
EDUC	.0012924***	-.0040459	.0084037	.0087281	.0034451
AGE	-.003142	.0080274***	.0018351	.0187664***	-.0015439
GENDER	-.0009868**	.0001573	.0002555	-.0000504	.0002056
GEN	.0089508	.008158	-.0028642	.0037115**	-.0084679
DEBT	.0300921	-.0269917**	-.1367826***	-.014156	-.0117715
FAGE	-.0008625***	-.0002361	-.000439	.0008119	.0001479
CP	.052053***	.0070995	-.0067318	.0237722*	.0019898
IP	.081096***	.012717***	.0011861	.0146967	.0087157
TS	.0517749***	-.0025654	.0126961	-.0218924*	-.0055941
PROP	.0931796***	.0052822	-.008771	-.0034424	-.0338921***
OTHERS	.1343831***	.0227671***	.0061455	.0430504**	-.0019406
_CONS	.7594172***	.0109048	-.0362161	-.138205***	.0835171***
Panel C: Non-family controlled companies					
BSIZE	-.0006077	.0047579***	.0064005***	.0154047***	.0068554***
BINED	-.0141954	-.0138093***	.0272192	-.0398117	-.0241872***
BDEG	.0212719	-.0066654	.0209027***	.0110807***	-.0164015
BEXP	.0374536***	.0269513***	.0809526***	.0070889	.0289007***
LSHIP	-.01414	.0016902	-.0137725	-.0249232***	.0038703
MOWN	.0006647	-.0014507***	.0000571	-.0039867***	-.0019986***
MOWN2	-.0000109	.0000251	-.0000183	.0000777	.0000382*

	Q	ROA	ROE	EPS	OCF
MOWN3	-3.20e-08	-2.39e-08	2.85e-07	-3.15e-07	-1.47e-07
DEBT	.0214819	-.0075858	-.0250785	-.0108306	.0005073
FAGE	.0004194*	-.000343**	-.0006023**	-.0010827***	-.0006443***
CP	.0989327***	.0002471	-.0554728***	.0081584	.0108074
IP	.1413381***	-.0079369	-.0456056**	-.0134301	.0183904*
TS	.116681***	-.0031257	-.0409596*	-.0057237	.0171628*
PROP	.0950301***	-.0099288	-.0707942***	-.0377702	-.0223434**
OTHERS	.1010263***	.0106502	-.0220121	.0557557*	.0289253***
_CONS	.6737123***	.0205932	.0246645	-.0419333	.0415883**

APPENDIX J: Sensitivity analysis for industries

	Q	ROA	ROE	EPS	OCF
Panel A: All companies					
FCF	.0004265***	.0002069***	.0004939***	.0001201	.0001384***
BSIZE	.0002484	.0050128***	.0052728***	.0053666***	.0045277***
BINED	-.0101622	-.0101318	.0268291***	-.0203578	-.0197454**
BDEG	.008659	.0003187	.0188098**	-.0006568	-.0114803**
BEXP	.0114508	.0184741***	.0357783***	.0468631***	.0280474***
LSHIP	-.0210695***	-.0053774**	.0122384***	-.0148404***	-.0020624**
MOWN	.0059915	.126423	.7102811***	-.1921072	.0187418
MOWN^2	.0294025	-.2972973	-1.80606***	.2362186	.0162228
MOWN^3	-.0546135	.2199465	1.486273***	-.0699548	-.0436375
DEBT	.0331287***	-.0065818	-.0477184	-.0135792	-.0060229
FSIZE	-.014592***	.0128071***	.0204697***	.0614943***	.0114631***
FAGE	-.000086	-.0001857*	-.0007341***	-.0009373***	-.0004673***
_CONS	.994115***	-.1730764***	-.3933718***	-.6733855***	-.0891093***
Panel B: Family-controlled companies					
BSIZE	-.0005317	.0052366***	.0084025***	.0049801***	.0041838***
BINED	.0073037	-.0065309	.0227274**	.0709762***	-.0162976
BDEG	.0033888	.0053763	-.0115253	.0185124	-.0032008
BEXP	-.0708006***	.0004586	-.0427793***	-.0222457	-.0277291***
LSHIP	-.0223012***	-.0139388***	-.0175092***	-.0024155	-.0249426***
FOWN	-.0007553	-.0036725***	-.0045097***	-.0048704***	-.0036642***
FOWN^2	.000038	.0001124***	.0001302***	.0000859***	.0001275***
FOWN^3	-4.07e-07	-8.86e-07***	-9.50e-07***	-1.61e-06***	-8.47e-07***

	Q	ROA	ROE	EPS	OCF
CEO	.0695134***	.0026686	-.0178067*	.0639027***	.0063328
EDUC	.0025034	.0048119***	.002336	.0131941	-.0029644
AGE	-.0002474	.000199	-.0004368*	.0001909	-7.94e-06
GENDER	.0143469	.0000829	-.012629	.0193907	.000452
GEN	.0125783	.0068302**	-.0063658	.011028	.0087833*
DEBT	.0428183**	-.027946*	-.1978235***	-.0758762	-.0183005
FSIZE	-.010636***	.0062533***	.0254624***	.0386001***	.0037721**
FAGE	-.0006241*	-.0000781	-.0010319***	.0011828**	.0001727
_CONS	.9755946***	-.0473755**	-.2452357***	-.5353067***	.0627552**
Panel C: Non-family controlled companies					
BSIZE	.0003916	.0034709***	.0045546***	.0056468**	.0046364***
BINED	-.0260586*	-.0295181**	.0291554	-.0633459**	-.0447683***
BDEG	.0377372***	-.0267***	.0040971	-.0184825	-.0525129***
BEXP	.0401472**	.0295684***	.1026585***	.0456658	.0460261***
LSHIP	-.0114244	-.0036807	-.011036	-.0299648***	-.0025475
MOWN	.0002389	-.0015091***	.0001433	-.0023185**	-.0021752***
$MOWN^2$	-2.63e-06	.0000379*	4.71e-06	.0000376	.0000531**
$MOWN^3$	-7.49e-08	-2.20e-07	-8.95e-08	-1.21e-07	-2.93e-07
DEBT	.0137355	-.004187	-.0326986	.001843	-.0038124
FSIZE	-.0181429***	.0138211***	.0186143***	.0654853***	.0149257***
FAGE	.0005773**	-.0002163*	-.0005318**	-.001176***	-.0007***
_CONS	1.004226***	-.1401366***	-.2396316***	-.7028432***	-.0876298***

APPENDIX K: Sensitivity analysis results for family CEO

	Q	ROA	ROE	EPS	OCF
BSIZE	-.001661	.002661***	.0059257***	.0051761**	.0038314***
BINED	.0176419	.0021404	.0292972	.0531586*	-.018169
BDEG	-.0011504	.0019679	-.0242011*	.0382442*	.0089223
BEXP	-.049842***	.0172013*	.0066856	.0171678	.0187537
LSHIP	-.007188	-.0026895	.0080323	-.0065995	-.0170393***
FOWN	-.0004707	-.0041206***	-.0047822***	-.0039931**	-.002756***
$FOWN^2$	.0000293	.0001114***	.000145***	.0001363***	.0000722***
$FOWN^3$	-3.57e-07	-7.93e-07***	-1.09e-06***	-1.06e-06**	-4.94e-07**
EDUC	.0028041	.0085972***	-.001019	.0175686*	-.0004006
AGE	.0002735	.0000641	-.0000184	.0004534	-.0000323
GENDER	.022937	.0041426	-.0144217	.0444058**	-.0029656
GEN	[illegible]	[illegible]	[illegible]	-.0061196	[illegible]
DEBT	.0404395**	-.0337595**	-.1863696***	-.0733393	-.0249015**
FSIZE	-.0168028***	.0074373***	.0265527***	.0466372***	.0073683***
FAGE	-.0007281*	-.0003789**	-.0012304***	-.0003361	-.0001464
CP	.0515974***	.0146796***	.0036294	.0491051***	.0178338**
IP	.0798916***	.018264***	.0141039	.0300304**	.0203183***
TS	.0619657***	-.0112091**	-.0322101***	-.0272216*	.0041964
PROP	.1186364***	-.0009349	-.0358464***	-.023263	-.0316846***
OTHERS	.1396065***	.0172121**	-.0136136	.0106165	-.0000632
_CONS	.9380491***	-.0604044***	-.2645863***	-.6596433***	.0109994

APPENDIX L: Sensitivity analysis results for gender

	Q	ROA	ROE	EPS	OCF
Panel A: Male					
BSIZE	-.0013209	.0024732***	.0058406***	.0049981***	.003243***
BINED	.0125734	-.0112558	.0054524	.0489328*	-.0220482**
BDEG	-.0055605	.0050349	-.0100362	.0412277**	.0163604*
BEXP	.0127491	.0259324	.0416942*	.0406294	.0105347
LSHIP	-.0052674	-.0045265	.000775	.0034563	-.0152649**
FOWN	-.0009642	-.0035964***	-.00429***	-.0038098**	-.0027531***
$FOWN^2$	.0000453	.0000998***	.0001303***	.0001427***	.000073***
$FOWN^3$	-4.94e-07*	-7.27e-07***	-9.60e-07***	-1.18e-06**	-5.06e-07**
CEO	.1001326***	.000221	-.001759	.0425834***	.0050629
EDUC	-.0036099	.0064101*	-.0105565	.0174556*	-.0012651
AGE	-.000323	-.0001532	-.0006004**	-.0003093	-.0002414
GEN	.0113835	-.0127274***	-.0173184***	-.0174157***	-.0181395***
DEBT	.0405991**	-.0288753**	-.189855***	-.0664116	-.0269905**
FSIZE	-.0172018***	.0065404***	.0251014***	.0445735***	.0068442***
FAGE	-.0002526	-.0001513	-.0007725**	.0009736	.0000832
CP	.0458947***	.0156004***	.0090257	.0423348***	.0141858**
IP	.0788606***	.0191738***	.0171936**	.0246782*	.0184234***
TS	.048633***	-.0044079	-.0128573	-.0129418	-.000947
PROP	.1063429***	-.0019296	-.0398448***	-.0353985**	-.0410179***
OTHERS	.1479513***	.0258641***	.0027316	.0159247	.0050629

	Q	ROA	ROE	EPS	OCF
_CONS	.8906727***	-.0310819	-.2283366***	-.6027182***	.0280551
Panel B: Female					
BSIZE	.011968	.0241874***	.0586166***	-.0479637***	.0214795***
BINED	-.2896503**	.2924957***	.5114891***	.0682104	.187748***
BDEG	-.1876185	-.6525057***	-1.589802***	.6235666***	-.777417***
BEXP	.3633907***	-.0533128**	.0138076	.1986033***	-.0546433
LSHIP	-.1419211	-1.916294***	-2.828798***	-1.436636***	-2.08513***
FOWN	.0562793	-.1779617***	-.1456623***	.2621261***	-.1870407***
$FOWN^2$	-.0009956	.0038213***	.0032097***	-.0057124***	.0039944***
$FOWN^3$	5.95e-06	-.0000269***	-.0000233***	.0000402***	-.0000281***
CEO	-.0401864	-.0690221***	-.2044571***	.1158185***	-.0667539***
EDUC	.0349725	-1.435205***	-1.776652***	-1.705556***	-1.609184***
AGE	-.0067214	.0023827	.0025295	-.0001273	.0052411
GEN	-.1663177	2.081922***	2.943685***	1.659171***	2.396945***
FSIZE	-.0020686	-.0240345**	.0183967	.1180335***	-.0751647***
FAGE	-.0034931	.348605***	.5419711***	.1506239**	.3933409***
CP	-.0556118	-1.391354***	-2.189511***	-.7162872***	-1.454061***
PROP	.0273949	-.6003615***	-1.17899***	.0920432	-.592716***
_CONS	.5970223	1.497634***	.0465872	-6.220761***	1.968331***

APPENDIX M: Sensitivity analysis results for non-family ownership

	Q	ROA	ROE	EPS	OCF
BSIZE	-.0016	.0049***	.0085***	.0031*	.0071***
BINED	-.0265	-.0755***	-.0701**	-.1634***	-.0683***
BDEG	.0488***	-.0513***	-.0843***	-.0225	-.0505***
BEXP	.0454*	.0921***	.1186***	.1293***	.0884***
LSHIP	-.0335**	.0111**	.0038	-.0021	.0009
BHOLDERS	.0000	.0004***	.0006***	.0008***	.0010***
DEBT	.0106	.0021	.0431	.1611**	.0195928
FSIZE	-.0227073***	.0124***	.0258215***	.0371***	.0085767***
FAGE	.0003	-.0000904	-.0001	-.0006*	-.0003*
CP	.0485**	.0023031	-.0674**	-.0510	.0092
IP	.1065***	-.0031	-.0726**	-.0655*	.0222**
TS	.0976122***	-.0146*	-.0919***	-.0644826*	.0161
PROP	.0949857***	-.007997	-.0945***	-.0560	-.0175*
OTHERS	.0662***	.0028023	-.0629**	-.0163	.0169
_CONS	1.002***	-.1506***	-.247136***	-.3512***	-.0844**

Appendix N: 40 Richest Malaysians 2010

Current ranking	Name	Age	Current wealth (as at Jan 15, 2010) (RM Mil)	Previous wealth (as at Jan 16, 2009) (RM Mil)	Flagship	Family Firm (FF) / Non-Family Firm (NFF)
1	Robert Kuok Hock Nien	86	42,760.00	26,600.00	Kerry Group/Kuok Group	FF
2	T. Ananda Krishnan	71	27,000.00	20,101.52	Usaha Tegas	NFF
3	Tan Sri Lee Shin Cheng	71	11,923.01	7,396.88	IOI Group	FF
4	Tan Sri Teh Hong Piow	80	10,860.00	8,158.26	Public Bank	NFF
5	Tan Sri Lim Kok Thay	58	10,386.01	958.59	Genting Group	FF
6	Tan Sri Quek Leng Chan	67	7,094.97	4,545.13	Hong Leong Group	FF
7	Tan Sri Syed Mokhar Albukhary	59	6,010.00	3.181.27	Al-Bukhary Foundation	NFF
8	Puan Sri Lee Kim Hua	81	4,412.88	3,496.35	Genting Group	FF
9	Tan Sri Tiong Hiew King	75	3,506.19	1,461.81	Rimbunan Hijau	NFF
10	Tan Sri Vincent Tan Chee Yioun	58	3,294.86	1,791.37	Berjaya Group	FF
11	Tan Sri Azman Hashim	70	2,860.00	1,424.51	Arab-Malaysian Corp	FF
12	Ong Beng Seng	64	2,019.70	1,100.63	Hotel Properties Ltd.	FF

Current ranking	Name	Age	Current wealth (as at Jan 15, 2010) (RM Mil)	Previous wealth (as at Jan 16, 2009) (RM Mil)	Flagship	Family Firm (FF) / Non-Family Firm (NFF)
13	Datuk Lee Yeow Chor	44	1,865.76	1,159.39	IOI Group	FF
14	Lee Yeow Seng	31	1,832.31	1,138.47	IOI Group	FF
15	Tan Sri Yeoh Tiong Lay	80	1,639.56	1,346.33	YTL Group	FF
16	Datuk Seri Lim Wee-Chai	52	1,383.31	501.08	Top Glove Bhd	NFF
17	Datuk Seri Lee Oi Hian	60	1,168.46	946.86	Batu Kawan	FF
18	Datuk Lee Hau Hian	57	1,168.46	940.00	Batu Kawan	FF
19	Tan Sri Francis Yeoh Seoh Sock Ping	56	1,115.40	903.29	YTL Group	FF
20	Datuk Mokhzani Mahathir	48	1,075.50	526.77	Kencana Petroleum	NFF
21	Datuk Yeoh Seok Hong	51	1,016.84	807.86	YTL Group	FF
22	Tan Sri Jeffrey Cheah Fook Ling	64	1,002.12	470.80	Sunway Group	NFF
23	Datuk Yeoh Seok Kian	53	996.02	814.30	YTL Group	FF
24	Datuk Michael Yeoh Sock Siong	50	990.29	808.65	YTL Group	FF
25	Datuk Mark Yeoh Seok Kah	45	976.72	797.30	YTL Group	FF
26	Datuk Yaw Teck Seng	72	833.10	490.00	Samling Group	FF
27	Puan Sri Chong Chook Yew	87	728.10	630.70	Selangor Properties	FF
28	Lee Swee Eng	55	685.43	-	KNM Group	NFF

Current ranking	Name	Age	Current wealth (as at Jan 15, 2010) (RM Mil)	Previous wealth (as at Jan 16, 2009) (RM Mil)	Flagship	Family Firm (FF) / Non-Family Firm (NFF)
29	Datuk Tony Tiah Thee Kian	63	586.55	312.39	TA Enterprise	FF
30	Datuk Seri Tony Fernandes	45	577.82	317.55	AirAsia	NFF
31	Datuk Seri Panglima Lau Co Kun	74	557.38	466.88	Hap Seng Consolidated	FF
32	Datuk Shahril Shamsuddin	49	544.35	-	Sapura Group	FF
33	Tan Sri Kua Sian Kooi	58	540.00	434.10	SP Setia	FF
34	Shahriman Shamsuddin	41	533.97	-	Sapura Group	FF
35	Tan Sri Liew Kee Sin	51	506.00	434.10	SP Setia	FF
36	Tan Sri Rozali Ismail	54	505.39	225.28	Puncak Niaga Holdings	FF
37	Datuk Kamarudin Meranun	48	473.61	257.60	AirAsia	NFF
38	Ong Leang Huat	66	444.92	-	OSK Holdings	NFF
39	Raja Datuk Seri Eleena Raja Azlan Shah	49	438.34	299.82	Puncak Niaga Holdings	NFF
40	Datuk Seri Nazir Razak	43	385.14	-	CIMB Group	NFF

(Source: Malaysian Business, February 16th, 2010, p. 16)

APPENDIX O: List of family-controlled companies

CONSTRUCTION

1	AHMAD ZAKI RESOURCES BERHAD
2	BINA PURI HOLDINGS BHD
3	BREM HOLDING BERHAD
4	CHEE WAH CORPORATION BERHAD
5	CREST BUILDER HOLDINGS BERHAD
6	GENERAL CORPORATION BERHAD
7	HOCK SENG LEE BERHAD
8	KEN HOLDINGS BERHAD
9	KUMPULAN JETSON BERHAD
10	LOH & LOH CORPORATION BERHAD
11	MITRAJAYA HOLDINGS BERHAD
12	MTD CAPITAL BHD
13	PINTARAS JAYA BHD
14	PLB ENGINEERING BERHAD
15	POH HUAT RESOURCES HOLDINGS BERHAD
16	SBC CORPORATION BERHAD
17	XIAN LENG HOLDINGS BERHAD
18	YTL CORPORATION BERHAD
19	ZECON ENGINEERING BERHAD

CONSUMER PRODUCT

1	APEX HEALTHCARE BERHAD
2	ASIA FILE CORPORATION BHD
3	BANENG HOLDINGS BHD
4	CCK CONSOLIDATED HOLDINGS BERHAD
5	DEGEM BERHAD
6	DKLS INDUSTRIES BHD
7	EUROSPAN HOLDINGS BERHAD
8	FEDERAL FURNITURE HOLDINGS (M) BERHAD
9	HO HUP CONSTRUCTION COMPANY BHD
10	HONG LEONG INDUSTRIES BERHAD
11	HUP SENG INDUSTRIES BERHAD
12	IREKA CORPORATION BERHAD
13	KHEE SAN BERHAD
14	KHIND HOLDINGS BERHAD

15	LATITUDE TREE HOLDINGS BERHAD
16	LAY HONG BERHAD
17	LEONG HUP HOLDINGS BERHAD
18	LII HEN INDUSTRIES BHD.
19	LION INDUSTRIES CORPORATION BERHAD
20	LONDON BISCUITS BERHAD
21	LTKM BERHAD
22	MALAYAN FLOUR MILLS BERHAD
23	MAMEE-DOUBLE DECKER (M) BERHAD
24	MINTYE INDUSTRIES BHD
25	NEW HOONG FATT HOLDINGS BERHAD
26	PCCS GROUP BERHAD
27	QL RESOURCES BERHAD
28	REX INDUSTRY BERHAD
29	SHH RESOURCES HOLDINGS BERHAD
30	SPRITZER BHD
31	TAKASO RESOURCES BERHAD
32	TAN CHONG MOTOR HOLDINGS BERHAD
33	TECK GUAN PERDANA BHD
34	TEO GUAN LEE CORPORATION BERHAD
35	UPA CORPORATION BHD
36	YEE LEE CORPORATION BHD
37	YIKON CORPORATION BERHAD
38	YONG TAI BHD

HOTEL

1	GRAND CENTRAL ENTERPRISES BHD
2	GULA PERAK BERHAD

INFRASTRUCTURE PROJECT

1	YTL POWER INTERNATIONAL BHD

INDUSTRIAL PRODUCT

1	AIKBEE RESOURCES BERHAD
2	ANN JOO RESOURCES BERHAD

3	APM AUTOMOTIVE HOLDINGS BERHAD
4	AUTOAIR HOLDINGS BERHAD
5	BOX-PAK (MALAYSIA) BERHAD
6	BRIGHT PACKAGING INDUSTRY BERHAD
7	BTM RESOURCES BERHAD
8	CHANGHUAT CORPORATION BERHAD
9	CHANGHUAT CORPORATION BERHAD
10	CHOO BEE METAL INDUSTRIES BHD
11	CHUAN HUAT RESOURCES BHD
12	FACB INDUSTRIES INCORPORATED BERHAD
13	GOH BAN HUAT BERHAD
14	HEXZA CORPORATION BERHAD
15	HIROTAKO HOLDINGS BHD
16	HUME INDUSTRIES (MALAYSIA) BERHAD
17	JAYA TIASA HOLDINGS BHD
18	KECK SENG (MALAYSIA) BERHAD
19	KESM INDUSTRIES BERHAD
20	KIA LIM BERHAD
21	KIM HIN INDUSTRY BERHAD
22	KOMARKCORP BERHAD
23	KOSSAN RUBBER INDUSTRIES BERHAD
24	KUMPULAN H & L HIGH-TECH BERHAD
25	KYM HOLDINGS BERHAD
26	LB ALUMINIUM BERHAD
27	LION CORPORATION BERHAD
28	LIPO CORPORATION BERHAD
29	LYSAGHT GALVANIZED STEEL BERHAD
30	MALAYSIAN AE MODELS HOLDINGS BERHAD
31	MELEWAR INDUSTRIAL GROUP BERHAD
32	METAL RECLAMATION BHD
33	MUDA HOLDINGS BERHAD
34	MULTI-CODE ELECTRONICS INDUSTRIES (M) BHD
35	OKA CORPORATION BHD
36	PAOS HOLDINGS BERHAD
37	PENSONIC HOLDINGS BERHAD
38	PRESS METAL BERHAD
39	PRESTAR RESOURCES BERHAD
40	QUALITY CONCRETE HOLDINGS BERHAD
41	SCIENTEX INCORPORATED BERHAD
42	SEACERA TILES BERHAD

43	SMIS CORPORATION BERHAD
44	SMPC CORPORATION BHD
45	SOUTHERN ACIDS (M) BERHAD
46	STONE MASTER CORPORATION BERHAD
47	SUPERMAX CORPORATION BERHAD
48	TA WIN HOLDINGS BERHAD
49	TONG HERR RESOURCES BERHAD
50	TOP GLOVE CORPORATION BHD
51	TRACOMA HOLDINGS BHD
52	TSH RESOURCES BERHAD
53	UCHI TECHNOLOGIES BERHAD
54	V.S. INDUSTRY BERHAD
55	WAH SEONG CORPORATION BERHAD
56	WATTA HOLDIND BERHAD
57	WHITE HORSE BERHAD
58	WONG ENGINEERING CORN BHD
59	WOODLANDOR HOLDINGS BHD
60	WTK HOLDINGS BERHAD
61	YLI HOLDINGS BERHAD
62	YTL CEMENT BERHAD
63	YUNG KONG GALVANISING INDUSTRIES BHD

PLANTATION

1	BATU KAWAN BERHAD
2	CHIN TECK PLANTATIONS BERHAD
3	HARN LEN CORPORATION BHD
4	IOI CORPORATION BERHAD
5	KIM LOONG RESOURCES BERHAD
6	KLUANG RUBBER COMPANY (MALAYA) BERHAD
7	KUALA LUMPUR KEPONG BERHAD
8	KWANTAS CORPORATION BERHAD
9	MENANG CORPORATION (M) BERHAD
10	NEGRI SEMBILAN OIL PALMS BERHAD
11	RIVERVIEW RUBBER ESTATES BERHAD
12	SUNGEI BAGAN RUBBER COMPANY (MALAYA) BERHAD
13	TANAH EMAS CORM BHD
14	UNITED PLANTATIONS BERHAD

PROPERTY

1	A & M REALTY BERHAD
2	AMDB BERHAD
3	ASAS DUNIA BERHAD
4	ASIA PACIFIC LAND BERHAD
5	BCB BERHAD
6	COUNTRY HEIGHTS HOLDINGS BHD
7	CRESCENDO CORPORATION BERHAD
8	DAIMAN DEVELOPMENT BHD
9	EKRAN BERHAD
10	EUPE CORPORATION BERHAD
11	FARLIM GROUP (MALAYSIA) BHD
12	GLOMAC BERHAD
13	HUNZA PROPERTIES BERHAD
14	IGB CORPORATION BERHAD
15	IOI PROPERTIES BERHAD
16	KELADI MAJU BHD
17	KSL HOLDINGS BERHAD
18	MEDA INC. BERHAD
19	METRO KAJANG HOLDINGS BERHAD
20	MK LAND HOLDINGS BERHAD
21	PJ DEVELOPMENT HOLDINGS BERHAD
22	PK RESOURCES BERHAD
23	SELANGOR DREDGING BERHAD
24	SELANGOR PROPERTIES BERHAD
25	YTL LAND & DEVELOPMENT BERHAD

TECHNOLOGY

1	GLOBETRONICS TECHNOLOGY BERHAD
2	KOBAY TECHNOLOGY BERHAD
3	LKT INDUSTRIAL BERHAD
4	UNISEM (M) BERHAD

TRADING SERVICES

1	BERJAYA LAND BERHAD
2	BERJAYA SPORTS TOTO BERHAD

3	CENTURY LOGISTICS HOLDINGS BERHAD
4	DIALOG GROUP BERHAD
5	EDEN ENTERPRISES (M) BERHAD
6	FIAMMA HOLDINGS BERHAD
7	FSBM HOLDINGS BERHAD
8	HAISAN RESOURCES BERHAD
9	HALIM MAZMIN BERHAD
10	HOCK SIN LEONG GROUP BERHAD
11	IPMUDA BERHAD
12	JOHAN HOLDINGS BERHAD
13	KNUSFORD BERHAD
14	MECHMAR CORPORATION (MALAYSIA) BERHAD
15	MESB BERHAD
16	METACORP BERHAD
17	MTD INFRAPERDANA BERHAD
18	NV MULTI CORPORATION BERHAD
19	PETRA PERDANA BERHAD
20	SENI JAYA CORPORATION BERHAD
21	THE STORE CORPORATION BERHAD
22	TRANSOCEAN HOLDINGS BHD
23	YINSON HOLDINGS BERHAD

APPENDIX P: List of non-family controlled companies

CONSTRUCTION

1	ASTRAL ASIA BERHAD
2	CHASE PERDANA BERHAD
3	FA PENINSULAR BHD
4	FAJAR BARU CAPITAL BHD
5	GAMUDA BERHAD
6	MAGNA PRIMA BERHAD
7	MALAYSIAN RESOURCES CORPORATION BERHAD
8	MUHIBBAH ENGINEERING (M) BHD
9	PERUSAHAAN SADUR TIMAH MALAYSIA (PERSTIMA) BHD
10	PILECON ENGINEERING BERHAD
11	RANHILL BERHAD
12	SPK-SENTOSA CORPORATION BERHAD
13	UEM WORLD BERHAD
14	WCT ENGINEERING BERHAD

CONSUMER PRODUCT

1	AJINOMOTO (MALAYSIA) BERHAD
2	AMTEK HOLDINGS BERHAD
3	APOLLO FOOD HOLDINGS BERHAD
4	CAM RESOURCES BERHAD
5	CARLSBERG BREWERY MALAYSIA BERHAD
6	DUTCH LADY MILK INDUSTRIES BERHAD
7	EKOVEST BERHAD
8	EMIVEST BERHAD
9	FORMOSA PROSONIC INDUSTRIES BERHAD
10	FRASER & NEAVE HOLDINGS BHD
11	GOLD IS BERHAD
12	GOLDEN PHAROS BERHAD
13	GUINNESS ANCHOR BERHAD
14	HUNZA CONSOLIDATION BERHAD
15	HWA TAI INDUSTRIES BERHAD
16	JOHN MASTER INDUSTRIES BERHAD
17	JT INTERNATIONAL BERHAD
18	KUANTAN FLOUR MILLS BHD
19	LEN CHEONG HOLDING BERHAD

20	MWE HOLDINGS BERHAD
21	NAKAMICHI CORPORATION BERHAD
22	NAM FATT CORPORATION BERHAD
23	NESTLE (MALAYSIA) BERHAD
24	ORIENTAL HOLDINGS BERHAD
25	PARAGON UNION BERHAD
26	PERAK CORPORATION BERHAD
27	PERUSAHAAN OTOMOBIL NASIONAL BHD
28	PPB GROUP BERHAD
29	PROLEXUS BERHAD
30	PUTERA CAPITAL BERHAD
31	RALCO CORPORATION BERHAD
32	TRADEWINDS (MALAYSIA) BERHAD
33	UMW HOLDINGS BERHAD
34	WIDETECH (MALAYSIA) BERHAD
35	YEO HIAP SENG (MALAYSIA) BERHAD

HOTEL

1	LANDMARKS BERHAD
2	SAUJANA CONSOLIDATED BERHAD
3	SHANGRI-LA HOTELS (MALAYSIA) BERHAD

INFRASTRUCTURE PROJECT

1	DIGI.COM BERHAD
2	LINGKARAN TRANS KOTA HOLDINGS BERHAD
3	PUNCAK NIAGA HOLDINGS BERHAD
4	TIME DOTCOM BERHAD

INDUSTRIAL PRODUCT

1	AE MULTI HOLDINGS BERHAD
2	AJIYA BERHAD
3	AMALGAMATED INDUSTRIAL STEEL BERHAD
4	ANCOM BERHAD
5	ASTRAL SUPREME BERHAD
6	ATLAN HOLDINGS BERHAD

7	B.I.G. INDUSTRIES BERHAD
8	BRITISH AMERICAN TOBACCO (MALAYSIA) BERHAD
9	C.I. HOLDINGS BERHAD
10	CENTRAL INDUSTRIAL CORPORATION BERHAD
11	CHEMICAL COMPANY OF MALAYSIA BERHAD
12	CHIN WELL HOLDINGS BERHAD
13	D'NONCE TECHNOLOGY BHD
14	DOLOMITE CORPORATION BERHAD
15	EKSONS CORPORATION BERHAD
16	ESSO MALAYSIA BERHAD
17	EVERMASTER GROUP BERHAD
18	FCW HOLDINGS BERHAD
19	FUTUTECH BERHAD
20	GOPENG BERHAD
21	GPA HOLDINGS BERHAD
22	INDUSTRIAL CONCRETE PRODUCTS BERHAD
23	JOTECH HOLDINGS BERHAD
24	JPK HOLDINGS BERHAD
25	KUMPULAN POWERNET BERHAD
26	LATEXX PARTNERS BERHAD
27	LEADER UNIVERSAL HOLDINGS BERHAD
28	LINEAR CORPORATION BERHAD
29	LINGUI DEVELOPMENTS BERHAD
30	MAGNI-TECH INDUSTRIES BERHAD
31	MALAYSIA AICA BERHAD
32	MALAYSIA PACKAGING INDUSTRY BERHAD
33	METROD (MALAYSIA) BERHAD
34	MIECO CHIPBOARD BERHAD
35	MINPLY HOLDINGS (M) BERHAD
36	MULTI-USAGE HOLDINGS BERHAD
37	NWP HOLDINGS BERHAD
38	NYLEX (MALAYSIA) BERHAD
39	OCTAGON CONSOLIDATED BERHAD
40	PAHANCO CORPORATION BERHAD
41	PETRONAS GAS BERHAD
42	PNE PCB BERHAD
43	PREMIUM NUTRIENTS BERHAD
44	ROCK CHEMICAL INDUSTRIES (MALAYSIA) BHD
45	SARAWAK CONCRETE INDUSTRIES BHD
46	SDKM FIBRES WIRES & CABLES BERHAD

47	SEAL INCORPORATED BERHAD
48	SHELL REFINING COMPANY (FEDERATION OF MALAYA) BERHAD
49	SINDORA BERHAD
50	SINORA INDUSTRIES BERHAD
51	SITT TATT BERHAD
52	SOUTHERN STEEL BERHAD
53	STS TECNIC BERHAD
54	SUBUR TIASA HOLDINGS BERHAD
55	SUNCHIRIN INDUSTRIES (MALAYSIA) BERHAD
56	SUPER ENTERPRISE HOLDINGS BERHAD
57	SYARIKAT KAYU WANGI BERHAD
58	TA ANN HOLDINGS BERHAD
59	TAI KWONG YOKOHAMA BERHAD
60	TASEK CORPORATION BERHAD
61	TECHVENTURE BERHAD
62	TEKALA CORPORATION BERHAD
63	TENGGARA OIL BERHAD
64	THONG GUAN INDUSTRIES BERHAD
65	TOYOCHEM CORM BHD
66	UAC BERHAD
67	VERSATILE CREATIVE BERHAD
68	WONDERFUL WIRE & CABLE
69	YA HORNG ELECTRONIC M BHD
70	YI-LAI BERHAD

PLANTATION

1	ASIATIC DEVELOPMENT BERHAD
2	BOUSTEAD HOLDINGS BERHAD
3	FAR EAST HOLDINGS BERHAD
4	GLENEALY PLANTATIONS (MALAYA) BERHAD
5	INCH KENNETH KAJANG RUBBER PUBLIC LTD CO
6	KRETAM HOLDINGS BERHAD
7	KULIM (MALAYSIA) BERHAD
8	KURNIA SETIA BERHAD
9	LADANG PERBADANAN-FIMA BHD
10	MULTI VEST RESOURCES BERHAD
11	PWE INDUSTRIES BERHAD
12	SARAWAK OIL PALMS BERHAD

13	TDM BERHAD
14	TH GROUP BERHAD
15	UNICO-DESA PLANTATIONS BERHAD
16	UNITED MALACCA BERHAD

PROPERTY

1	BANDAR RAYA DEVELOPMENTS BERHAD
2	BINA DARULAMAN BERHAD
3	COUNTRY VIEW BERHAD
4	DAMANSARA REALTY BHD
5	DIJAYA CORPORATION BERHAD
6	EASTERN & ORIENTAL BERHAD
7	ECONSTATES BERHAD/RBLAND
8	FIMA CORPORATION BERHAD
9	FOCAL AIMS HOLDINGS BERHAD
10	GOLDEN PLUS HOLDINGS BERHAD
11	JOHOR LAND BERHAD
12	LIEN HOE CORPORATION BERHAD
13	MERCES HOLDINGS BERHAD
14	MERGE HOUSING BHD
15	MUI PROPERTIES BERHAD
16	MUTIARA GOODYEAR DEVELOPMENT BERHAD
17	ORIENTAL INTEREST BERHAD
18	PARAMOUNT CORPORATION BERHAD
19	PASDEC HOLDINGS BERHAD
20	PETALING TIN BERHAD
21	SOUTH MALAYSIA INDUSTRIES BERHAD
22	SUNRISE BERHAD
23	TANCO HOLDINGS BERHAD
24	TEBRAU TEGUH BERHAD
25	UNITED MALAYAN LAND BERHAD

TECHNOLOGY

1	AIC CORPORATION BERHAD
2	AKN TECHNOLOGIES
3	ENG TEKNOLOGI HOLDINGS BHD
4	INDUSTRONICS BERHAD

5	MALAYSIAN PACIFIC INDUSTRIES BERHAD
6	MESINIAGA BERHAD
7	PATIMAS COMPUTERS BERHAD

TRADING SERVICES

1	AMTEL HOLDINGS BERHAD
2	AMWAY (MALAYSIA) HOLDINGS BERHAD
3	BINTULU PORT HOLDINGS BERHAD
4	CME GROUP BERHAD
5	CN ASIA CORPORATION BHD
6	CNLT (FAR EAST) BERHAD
7	COMPUTER FORMS (MALAYSIA) BERHAD
8	CONCRETE ENGINEERING PRODUCTS BERHAD
9	EASTERN PACIFIC INDUSTRIAL CORPORATION BERHAD
10	GENTING BERHAD
11	GEORGE KENT (MALAYSIA) BERHAD
12	GLOBAL CARRIERS BERHAD
13	GOLSTA SYNERGY BERHAD
14	HAP SENG CONSOLIDATED BERHAD
15	HARRISONS HOLDINGS (MALAYSIA) BERHAD
16	INTEGRATED LOGISTICS BHD
17	INTI UNIVERSAL HOLDINGS BHD
18	KFC HOLDINGS (MALAYSIA) BERHAD
19	KONSORTIUM LOGISTIK BERHAD
20	KPJ HEALTHCARE BERHAD
21	KUB MALAYSIA BERHAD
22	KUMPULAN PERANGSANG SELANGOR BERHAD
23	MALAYAN UNITED INDUSTRIES BERHAD
24	MALAYSIA AIRPORTS HOLDINGS BERHAD
25	MALAYSIA MINING CORPORATION BERHAD
26	MALAYSIAN MERCHANT MARINE BERHAD
27	MALAYSIAN MOSAICS BERHAD
28	MATRIX INTERNATIONAL BERHAD
29	MBM RESOURCES BHD
30	MULPHA INTERNATIONAL BERHAD
31	MULTI-PURPOSE HOLDINGS BERHAD
32	NANYANG PRESS HOLDINGS BERHAD
33	NCB HOLDINGS BERHAD

34	NEPLINE BERHAD
35	OCB BERHAD
36	OILCORP BERHAD
37	PAN MALAYSIAN INDUSTRIES BERHAD
38	PBA HOLDINGS BHD
39	PDZ HOLDINGS BHD
40	PETRONAS DAGANGAN BHD
41	PHARMANIAGA BERHAD
42	POS MALAYSIA & SERVICES HOLDINGS BERHAD
43	RELIANCE PACIFIC BERHAD
44	RESORTS WORLD BERHAD
45	RHYTHM CONSOLIDATED BERHAD
46	SEE HUP CONSOLIDATED BERHAD
47	STAMFORD COLLEGE BERHAD
48	STAR PUBLICATIONS (MALAYSIA) BERHAD
49	TALIWORKS CORPORATION BERHAD
50	TAMADAM BONDED WAREHOUSE BERHAD
51	TANJONG PUBLIC LIMITED COMPANY
52	TELEKOM MALAYSIA BERHAD
53	TENAGA NASIONAL BHD
54	TEXCHEM RESOURCES BERHAD
55	TIME ENGINEERING BERHAD
56	TRANSMILE GROUP BERHAD
57	UMS HOLDINGS BERHAD
58	UTUSAN MELAYU (MALAYSIA) BERHAD
59	WARISAN TC HOLDINGS BERHAD

APPENDIX Q: List of NEDs related with family directors

NO.	COMPANY NAME	%OWNNED
1	A & M REALTY BERHAD	
2	AHMAD ZAKI RESOURCES BERHAD	
3	AIKBEE RESOURCES BERHAD	
4	AMDB BERHAD	23.00
5	ANN JOO RESOURCES BERHAD	
6	APEX HEALTHCARE BERHAD	
7	APM AUTOMOTIVE HOLDINGS BERHAD	46.07
8	ASAS DUNIA BERHAD	
9	ASIA FILE CORPORATION BHD	
10	ASIA PACIFIC LAND BERHAD	
11	AUTOAIR HOLDINGS BERHAD	
12	BANENG HOLDINGS BHD	
13	BATU KAWAN BERHAD	48.87
14	BCB BERHAD	
15	BERJAYA LAND BERHAD	1.35
16	BERJAYA SPORTS TOTO BERHAD	
17	BINA PURI HOLDINGS BHD	7.13
18	BOX-PAK (MALAYSIA) BERHAD	
19	BREM HOLDING BERHAD	2.56
20	BRIGHT PACKAGING INDUSTRY BERHAD	
21	BTM RESOURCES BERHAD	18.20
22	CCK CONSOLIDATED HOLDINGS BERHAD	
23	CENTURY LOGISTICS HOLDINGS BERHAD	
24	CHANGHUAT CORPORATION BERHAD	
25	CHEE WAH CORPORATION BERHAD	
26	CHIN TECK PLANTATIONS BERHAD	0.17
27	CHOO BEE METAL INDUSTRIES BHD	
28	CHUAN HUAT RESOURCES BHD	
29	COUNTRY HEIGHTS HOLDINGS BHD	
30	CREST BUILDER HOLDINGS BERHAD	
31	DAIMAN DEVELOPMENT BHD	
32	DEGEM BERHAD	
33	DIALOG GROUP BERHAD	
34	DKLS INDUSTRIES BHD	
35	EDEN ENTERPRISES (M) BERHAD	

NO.	COMPANY NAME	%OWNNED
36	EKRAN BERHAD	0.35
37	EUPE CORPORATION BERHAD	38.67
38	EUROSPAN HOLDINGS BERHAD	
39	FACB INDUSTRIES INCORPORATED BERHAD	
40	FARLIM GROUP (MALAYSIA) BHD	
41	FIAMMA HOLDINGS BERHAD	50.58
42	FSBM HOLDINGS BERHAD	
43	GENERAL CORPORATION BERHAD	10.82
44	GLOBETRONICS TECHNOLOGY BERHAD	0.74
45	GLOMAC BERHAD	
46	GOH BAN HUAT BERHAD	
47	GOLD IS BERHAD	26.91
48	GRAND CENTRAL ENTERPRISES BHD	
49	GULA PERAK BERHAD	
50	HAISAN RESOURCES BERHAD	
51	HALIM MAZMIN BERHAD	0.08
52	HARN LEN CORPORATION BHD	52.64
53	HEXZA CORPORATION BERHAD	26.40
54	HIROTAKO HOLDINGS BHD	
55	HO HUP CONSTRUCTION COMPANY BHD	
56	HOCK SENG LEE BERHAD	
57	HOCK SIN LEONG GROUP BERHAD	
58	HONG LEONG INDUSTRIES BERHAD	
59	HUME INDUSTRIES (MALAYSIA) BERHAD	
60	HUNZA PROPERTIES BERHAD	0.05
61	HUP SENG INDUSTRIES BERHAD	58.95
62	IGB CORPORATION BERHAD	34.40
63	IOI CORPORATION BERHAD	
64	IOI PROPERTIES BERHAD	
65	IPMUDA BERHAD	
66	IREKA CORPORATION BERHAD	
67	JAYA TIASA HOLDINGS BHD	0.04
68	KECK SENG (MALAYSIA) BERHAD	
69	KELADI MAJU BHD	28.00
70	KEN HOLDINGS BERHAD	
71	KESM INDUSTRIES BERHAD	
72	KHEE SAN BERHAD	

NO.	COMPANY NAME	%OWNNED
73	KHIND HOLDINGS BERHAD	
74	KIA LIM BERHAD	0.69
75	KIM HIN INDUSTRY BERHAD	
76	KIM LOONG RESOURCES BERHAD	
77	KLUANG RUBBER COMPANY (MALAYA) BERHAD	49.13
78	KNUSFORD BERHAD	
79	KOBAY TECHNOLOGY BERHAD	26.62
80	KSL HOLDINGS BERHAD	
81	KUALA LUMPUR KEPONG BERHAD	46.56
82	KUMPULAN H & L HIGH-TECH BERHAD	
83	KUMPULAN JETSON BERHAD	
84	KWANTAS CORPORATION BERHAD	
85	KYM HOLDINGS BERHAD	
86	LATITUDE TREE HOLDINGS BERHAD	9.95
87	LAY HONG BERHAD	45.30
88	LB ALUMINIUM BERHAD	17.69
89	LEONG HUP HOLDINGS BERHAD	44.09
90	LII HEN INDUSTRIES BHD.	
91	LION CORPORATION BERHAD	47.60
92	LION INDUSTRIES CORPORATION BERHAD	
93	LKT INDUSTRIAL BERHAD	5.47
94	LOH & LOH CORPORATION BERHAD	
95	LONDON BISCUITS BERHAD	56.96
96	LTKM BERHAD	55.74
97	LYSAGHT GALVANIZED STEEL BERHAD	56.01
98	MALAYAN FLOUR MILLS BERHAD	
99	MECHMAR CORPORATION (MALAYSIA) BERHAD	
100	MEDA INC. BERHAD	
101	MELEWAR INDUSTRIAL GROUP BERHAD	
102	MENANG CORPORATION (M) BERHAD	
103	MESB BERHAD	
104	METAL RECLAMATION BHD	
105	METRO KAJANG HOLDINGS BERHAD	
106	MINHO (M) BERHAD	
107	MINTYE INDUSTRIES BHD	
108	MITRAJAYA HOLDINGS BERHAD	
109	MK LAND HOLDINGS BERHAD	

NO.	COMPANY NAME	%OWNNED
110	MTD CAPITAL BHD	21.21
111	MTD INFRAPERDANA BERHAD	71.55
112	MUDA HOLDINGS BERHAD	
113	MULTI-CODE ELECTRONICS INDUSTRIES (M) BHD	7.97
114	NEGRI SEMBILAN OIL PALMS BERHAD	58
115	NEW HOONG FATT HOLDINGS BERHAD	
116	NV MULTI CORPORATION BERHAD	
117	OKA CORPORATION BHD	
118	PAOS HOLDINGS BERHAD	
119	PCCS GROUP BERHAD	41.74
120	PENSONIC HOLDINGS BERHAD	
121	PETRA PERDANA BERHAD	
122	PINTARAS JAYA BHD	
123	PJ DEVELOPMENT HOLDINGS BERHAD	
124	PK RESOURCES BERHAD	
125	PLB ENGINEERING BERHAD	
126	POH HUAT RESOURCES HOLDINGS BERHAD	2.08
127	PRESS METAL BERHAD	
128	PRESTAR RESOURCES BERHAD	
129	PWE INDUSTRIES BERHAD	
130	QL RESOURCES BERHAD	
131	QUALITY CONCRETE HOLDINGS BERHAD	
132	REX INDUSTRY BERHAD	
133	RIVERVIEW RUBBER ESTATES BERHAD	62.68
134	SBC CORPORATION BERHAD	
135	SCIENTEX INCORPORATED BERHAD	40.49
136	SDKM FIBRES WIRES & CABLES BERHAD	
137	SEACERA TILES BERHAD	
138	SEE HUP CONSOLIDATED BERHAD	
139	SELANGOR DREDGING BERHAD	13.09
140	SELANGOR PROPERTIES BERHAD	
141	SENI JAYA CORPORATION BERHAD	
142	SHH RESOURCES HOLDINGS BERHAD	
143	SMIS CORPORATION BERHAD	
144	SOUTHERN ACIDS (M) BERHAD	
145	SPRITZER BHD	
146	STONE MASTER CORPORATION BERHAD	

NO.	COMPANY NAME	%OWNNED
147	SG BAGAN RUBBER COMPANY (MALAYA) BERHAD	58.19
148	SUPERMAX CORPORATION BERHAD	0.02
149	TA WIN HOLDINGS BERHAD	
150	TAKASO RESOURCES BERHAD	41.42
151	TAN CHONG MOTOR HOLDINGS BERHAD	
152	TANAH EMAS CORM BHD	
153	TECK GUAN PERDANA BHD	
154	TEO GUAN LEE CORPORATION BERHAD	
155	THE STORE CORPORATION BERHAD	
156	TONG HERR RESOURCES BERHAD	
157	TOP GLOVE CORPORATION BHD	
158	TRACOMA HOLDINGS BHD	
159	TRANSOCEAN HOLDINGS BHD	
160	TSH RESOURCES BERHAD	
161	UCHI TECHNOLOGIES BERHAD	50
162	UNISEM (M) BERHAD	
163	UNITED PLANTATIONS BERHAD	
164	UPA CORPORATION BHD	
165	V.S. INDUSTRY BERHAD	
166	WAH SEONG CORPORATION BERHAD	
167	WATTA HOLDIND BERHAD	
168	WHITE HORSE BERHAD	9.47
169	WONG ENGINEERING CORN BHD	
170	WOODLANDOR HOLDINGS BHD	
171	WTK HOLDINGS BERHAD	23.08
172	XIAN LENG HOLDINGS BERHAD	23.32
173	YA HORNG ELECTRONIC M BHD	
174	YEE LEE CORPORATION BHD	
175	YINSON HOLDINGS BERHAD	
176	YLI HOLDINGS BERHAD	
177	YONG TAI BHD	
178	YTL CEMENT BERHAD	
179	YTL CORPORATION BERHAD	
180	YTL LAND & DEVELOPMENT BERHAD	
181	YTL POWER INTERNATIONAL BHD	
182	YUNG KONG GALVANISING INDUSTRIES BHD	
183	ZECON ENGINEERING BERHAD	